Ranganathan Series in Library Science, 14

LIBRARY SCIENCE TODAY

RANGANATHAN FESTSCHRIFT

Volume 1

Ranganathan Series in Library Science

1. *Library movement in India, a symposium,* ed by P N Kaula
2. *Classified catalogue code with additional rules for dictionary catalogue code,* by S R Ranganathan
3. *Library administration,* by S R Ranganathan
4. *Colon classification,* by S R Ranganathan
5. *Social science research and libraries,* ed by S R Ranganathan and Girija Kumar
6. *Library manual,* by S R Ranganathan
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11. *Decimal Classification and Colon Classification in perspective,* by R S Parkhi
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14. *Library science today :* Ranganathan festschrift Volume I—*Essays offered to S R Ranganathan on his seventy-first birthday,* ed by P N Kaula
15. *An essay in personal bibliography:* Ranganathan festschrift Volume 2—*Bibliography of the writings on and by S R Ranganathan,* by A K Das Gupta
16. *Library book selection,* by S R Ranganathan
17. *Library manual* (Hindi translation), by P N Kaula

LIBRARY SCIENCE TODAY

RANGANATHAN FESTSCHRIFT

VOLUME 1

Papers Contributed on the 71st Birthday of Dr S R Ranganathan

(12 August 1962)

Edited by

P N KAULA

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The Five Laws of Library Science

1 Books are for use
2 Every reader his book
3 Every book its reader
4 Save the time of the reader
5 A library is a growing organism

ग्रन्थलयी सदासेवी पञ्चसूत्री परायणः ।
ग्रन्था ध्येतुम् एते च सर्वेभ्यः स्वं स्वमाप्नुः ॥
अध्येतुः समयं शेषेत् आलयो नित्यमेव च ।
वर्धिष्णुः एष चिन्मूर्तिः पञ्चसूत्री सदा जयेत् ॥

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PART A

PRELIMINARY

CHAPTER A0

Foreword

I am glad that Dr S R Ranganathan who has attained an international status by his contributions to Library science, is being felicitated by an International committee on his 71st birthday. Dr Ranganathan has not only organised the Madras University Library and distinguished himself as an original thinker, but is also instrumental in creating library consciousness in the country as a whole. The library science and profession have secured a proper status in India mainly as a result of his work and teaching during the last 40 years. On this occasion, I would like to pay my tribute to Dr Ranganathan for his outstanding work and his dedication to learning.

New Delhi, — Rajendra Prasad
26 March 1962 — President of India

CHAPTER A1

Preface

Dr S R Ranganathan has attained world-wide recognition as a Master of Library Science by his new theory which is appreciated greatly all over the world. The articles and the contributions to the book that have been received, both from individuals and organisations, bear ample testimony to his genius which has received recognition from our Government and the Governments of other countries and from specialists. An incident relating to my personal experience is worth mentioning on this occasion. Mr G Mavalankar as the Speaker of the Lok Sabha (Lower House of the Indian Parliament) and myself as his Deputy together with our Secretary went to Washington and paid a visit to the Library of Congress there. At the remark inadvertently made to him by our Secretary that we had gone there to study Library Science, the Librarian of the American Congress flared up and said that it was meaningless for us all, to go all the way to America to study Library Science when Dr Ranganathan, the author of the new scheme, was physically present with us in our own country. This is the tribute that was paid to Dr Ranganathan by the librarian of one of the biggest libraries of the world. Geniuses are not easily appreciated in their own countries and it so happened with Dr Ranganathan also. He has revolutionised the Library Science. He is both a teacher and a research scholar and in both capacities he has acquitted himself very well with a continuous record of service in both the fields. Even now he is running a research training institute for librarians in Bangalore.

I am happy that the articles and the contributions from various quarters will give a succinct history of the activities of this great internationl figure. There are more than 100 papers contributed to this volume. All these contain tributes to him.

I am sure that the book dealing with several aspects of Library Science will be found both interesting and instructive.

M Ananthasayanam Ayyanger
Governor of Bihar
and
Chairman,
Ranganathan Commemoration
Volume Committee

CHAPTER A2

Introduction

P N KAULA

0 Contributions of Great Men

THE advancement of science and technology, humanities and sociology, civilisation and anthropology, and the all-round development in man is due to his tireless efforts and sacrifices. World is full of great minds who have, through their sweat and blood, improved mankind. These great men have developed in different ways. Some were born great; some achieved greatness through sweat and blood; and some had greatness thrust on them by circumstances. In every walk of life, there have been great men of one category or the other. The greatest contribution to civilisation and to the world at large, is by those great men who belong to the second category. In the field of library science, there appeared two great minds who developed and reformed library science. The one created it, the other reformed it and gave it a different shape. The one appeared in the nineteenth century and the other in the twentieth. The one was born in the West and the other in the East. The one was Dr Melvile Dewey and the other is Dr S R Ranganathan.

01 FATE OF A GENIUS

Among the galaxy of the great, there appears a genius. A genius is generally recognised after his life-time. There have been some great minds who were not destined to be recognised by their own people while they were alive. Fortunate is the community which recognises them during their life-time. Though it is a fact that they never seek recognition by themselves; it is, however, a pity that often for the recognition of a genius by the people of his own country, a certificate or an encomium from abroad appears to be necessary and especially for an Indian of today. Even in the West, similar has been the experience. Newton, Galileo, Addison, Heaveside, Einstein are all examples. Dewey, too, was not recognised adequately while he was alive. The recognition came to him too late. Perhaps it is inherent in the blood of man to refuse recognition to those who lead a new path, show new light, and break age-old traditions. In India, too, the story has been repeated in the same way. Tagore was first recognised by the West, and not by his own people, Raman's true worth was honoured first by the West, and not by his own people, and Ramanujan was fully understood first by the West, and not by his own people Today we bask in the glories of these great minds and say with a certain amount of pride, that Ramanujan is the greatest mathematician that India has ever produced, Tagore is the greatest poet that the East has ever produced, Raman is the greatest physicist that the Eastern Hemisphere has ever known It is not, therefore, strange that in the field of library science, Dr Ranganathan who did everything to make this subject a science and took it deeper to the level of research, was not recognised for a long time True to this tradition, the depth of his contributions was first understood and appreciated by the foreigners

1 Dr Ranganathan

Dr Ranganathan is a genius in the library field and has given everything for the cause of libraries He has yet to be properly recognised by the profession within India The British Government, in its own way, did recognise him as early as 1936 and conferred a title of *Rao Sahib*, the name by which he is popularly known and addressed by his students The Indian Government awarded the distinction of *Padmashree* in 1956 Dr Ranganathan's contribution entitles him to much more and that has yet to come

11 ENCOMIA

It is not my intention to catalogue the achievements of Dr Ranganathan in this introduction His contributions are unique and immense In the words of the Late Sir Maurice Gwyer, former Vice-Chancellor of the University of Delhi and Chief Justice of India, "He is the father of the Library Science in India and has done more than any other man to make India, as the saying goes, library-conscious His works cover every field of Library Science and themselves constitute a library His reputation as a Librarian, extends far beyond the borders of his own country, and his opinion and advice are followed in all lands where books and libraries are held in honour" It was Sir Maurice Gwyer of England, who, in India, discovered Dr Ranganathan He invited him to the University of Delhi to organise the Department of Library Science to institute for the first time, in the Commonwealth countries, the Master's Degree and Doctorate in Library Science It was through him that Dr Ranganathan started actually a new phase of his life in Library Science Earlier, H E Bliss had remarked that "the erudition, industry, insight and ingenuity of the author (Ranganathan) are truly admirable" As early as 1943, B I Palmer had counted him "among the immortals of our profession" Berwick Sayers went to the extent of calling the present age the "Age of Ranganathan" and had stated much earlier "his name is on the lips and pens of all who are concerned with classification" What is still more admirable in his relation with Ranganathan, who was his student, is his statement, "If Bliss and Ranganathan owe trifling things to me, I owe more to them than I am able to express here " From America, many top library specialists and scientists—Dr Jesse H Shera, Dr Ralph Shaw, and several others—have dwelt, in several places, on what Dr Ranganathan has been able to contribute to Library Science Seymour Lubetzky has gone to the extent of stating, "like countless others who have benefited from his writings, I am profoundly indebted to him". A J Wells is a "convinced disciple of Ranganathan" and has, on several occasions, referred to his "debt" to Dr Ranganathan. From each country in the world, librarians and library-scientists have acknowledged the value of his contributions and his influence on Library Science.

12 LATEST WORKS

The Classification Research Group, London, have acknowledged the merits of Ranganathan's techniques and have designed a number of Faceted Classifications Not only that, the latest works on classification and cataloguing by B I Palmer, A J Wells, B C Vickery, J Mills, D J Foskett and E J Coates have propounded and interpreted Ranganathan's ideas and techniques with insight and conviction

13 WORLD CONGRESS OF LIBRARIANS

The Third World Congress of Librarians and Documentalists was held in Brussels, in September, 1955 and Dr Ranganathan presided over the sessions on Classification The Conference accepted Dr Ranganathan's approach to documentation work based on *Facet-Analysis*

14 INTERNATIONAL STUDY CONFERENCE ON CLASSIFICATION

Besides these, an International Study Conference on Classification was held at Dorking (England) in 1957, sponsored jointly by the FID, the ASLIB, the London School of Librarianship, and the Classification Research Group of London This Conference was convened to study Ranganathan's ideas on classification Dr Ranganathan was invited to deliver the opening address, and what was the main decision of the Conference ? Acceptance of Facet-Analysis as the basis of classification !

15 INTERNATIONAL RECOGNITION

On 18 September 1957, FID honoured Dr Ranganathan by electing him unanimously an Honorary Member—a distinction which has been conferred only on six persons during the long history of FID. In 1957, the British Library Association honoured him by electing him a Vice-President for life.

2 Main Contributions

It is not necessary for me to state here all the achievements of Dr Ranganathan However, it must be recognised that he has written on almost all branches of library science, and his contributions are original, creative, and practical He is the most prolific writer in library science He is the author of over 50 works, nearly 1000 articles and scores of library development plans He is an outstanding pioneer of library movement in India His contributions are immense, among them the chief are the Five Laws of Library Science, Facet-analysis, Phase-analysis, Zone-analysis, Sector notation, Group notation, Seminal mnemonics, Fundamental categories, Canons of classification, Principles of Helpful Sequence, Postulational approach and several other devices in classification, the first and the only complete code for Classified Catalogue, Chain Procedure, and Canons of cataloguing, Three Card System for periodicals, Library Law and Library system, Depth Classification and Feature Headings in Documentation, and Standardisation of library techniques and of library buildings, fitting and furniture Above all, he has been the first in India, to institute the Diploma and Degree Courses in library science The first Endowed Chair in Library Science in India, and perhaps in the World outside the United States, has also been established by the donation of the life's earnings of Dr Ranganathan He has been a teacher of library science since 1929 and has been the first Professor of the subject in India He has also been connected with International Organisations, such as UN, UNESCO, IFLA, FID and ISO He is known widely among the libraries and the librarians throughout the world.

3 First Move for the Festschrift

To pay homage to this world-librarian about a decade back, I started with a move at the All India Library Conference at Indore in 1951, for presenting a *Festschrift* to Dr Ranganathan on his completing the 60th year in 1952 The move received a favourable response from librarians, but on my return from Indore, when Dr Ranganathan came to know about this development, he forced me to drop it.

4 Ranganathan Endowment for Library Science

However, the inner urge continued to simmer in my mind and in order that Dr Ranganathan may not again disapprove of our efforts, it was decided to create an Endowment for Library Science in his name His students in Delhi and outside joined hands together and established the Ranganathan Endowment for Library Science in 1952, with myself as the Secretary and S Das Gupta as the Chairman. The idea was to institute Gold Medal in Library Science in library schools. This was the form which accorded with Ranganathan's own idea about the use of the fund collected Soon the students of Ranganathan contributed, and a sum of Rs 4,000 00 was collected In 1957, it was decided by the Endowment Committee to utilise the amount for publication work and start a Series—the Ranganathan Series in Library Science In April 1961, it was made the nucleus for an Endowment for a periodical course of lectures on the results of current research in library science and their publication. This Endowment is named after his wife as Sarada Ranganathan Endowment in Library Science It has been entrusted to the Registrar of Charitable Endowments of the Government of India The administration of the proceeds of the Fund is vested in a self-perpetuating committee

5 Jubilee Volume

The urge in me for a *Festschrift* again got revived in 1958 It was decided to celebrate the Silver Jubilee of the Colon Classification—the most outstanding contribution of Dr Ranganathan In 1959, under the auspices of the Delhi Library Association, it was also decided to celebrate the Silver Jubilee of his second outstanding contribution—the Classified Catalogue Code The Jubilee Volume was to be presented to Dr Ranganathan at a Conference in Delhi in 1959. I had, by that time, become the Reader in Library Science at the University of Delhi and took the initiative of inviting contributions from specialists and library-scientists in and outside India A number of contributions and felicitations were received But as bad luck would have it, the entire material received by me was lost, never to be traced again. I was, therefore, forced by Providence to drop the idea Undauntedly, however, an attempt was made to get duplicate copies of the papers but not with much success

6 Planning of the Festschrift

The inner urge could not be suppressed for long Having shifted to Banaras and having organised an All U P Library Conference in December 1960, I lost no time in contacting the librarians available in India to have their advice on celebrating the Birthday of Dr Ranganathan and present a Festschrift to him A tour to Calcutta, Bombay and Delhi in February and March 1961 gave a concrete shape to this project It was proposed to form an International Committee and present the *Festschrift* to Dr Ranganathan in August 1962, when he would be completing his 70th year

61 INTERNATIONAL COMMITTEE

The encouraging response from members of the library profession brought an International Committee into existence Specialists, librarians and library-scientists and admirers of Dr Ranganathan from several countries consented to be members of the Committee and be associated with this pleasant task of felicitating Dr Ranganathan The Ranganathan Commemoration Volume Committee set up its Office at Banaras, with Mr Ananthasayanam Ayyangar, the then Speaker, Lok Sabha (India) as the Chairman and myself as the Secretary Many top librarians of several countries have become members of the Committee The list of the members is given separately in chapter X

62 ANALYSIS

An analysis of the members of the Committee will show that this Committee is unique in its constribution It is for the first time that a librarian is being honoured internationally by a Committee consisting of the most of the top persons in the profession from several countries of the world International Organisations and Associations are also associated with this Committee The country-wise analysis of members is as under

International Organisations	*Members*
International Federation for Documentation (FID)	2
International Federation of Library Associations (IFLA)	1
International Labour Organisation (ILO)	1
United Nations (UN)	3
United Nations International, Scientific and Cultural Organisation (UNESCO)	3

Name of the Country	*Members*	*Name of the Country*	*Members*
Australia	3	Israel	1
Austria	1	Japan	3
Canada	3	Nepal	1
Ceylon	2	Norway	1
Denmark	2	Pakistan	7
Fiji	1	Rhodesia	1
France	3	South Africa	2
Germany	5	Sweden	1
Great Britain	7	Switzerland	1
India	36	United States	22
		USSR	1

7 Contributions

The response to the request for contributions has been immense Many top professionals have sent their contributions for inclusion in the *Festschrift* The total number of contributions received by the Committee is 110 The contributions pertain to all the branches of Library Science Its subject-wise analysis is as under

71 Subject-wise Analysis

Colon No	*Subject*	*No of papers*	*Colon No*	*Subject*	*No of papers*
*a*14,2	Reference tools	4	2 51N3	Colon classification	6
2*w*M92	Reminiscences	9	2 55	Cataloguing	6
2*x*M92 *g*	Evaluation of life and		2 55 42	Cataloguing in Japan	4
	work of Ranganathan	21	2 55A	Subject catalogue	4
2*z*2	Laws of library science	4	2 55A N	Chain procedure	3
2	Librarianship	4	2 8	Administration	3
2 1-1	Library movement	4	2 97	Documentation	4
2 3	Library organisation	9	2 97*y*5	Documentation standards	2
2 51	Classification	5	2,Y *t*	Professional training	5
2 51A3	Faceted classification	3	234	University libraries	4
			T 3	Teaching technique	4
			T3	Social education	2

72 Geographical Analysis

The country-wise analysis of the contributions will give an idea of the widely representative character of the contributions Besides the host-country, the United States has contributed a large number of papers The full analysis is as under

Name of the Country	*No of papers*	*Name of the Country*	*No of papers*
		Japan	5
Australia	1	Nepal	1
Austria	1	Norway	2
Germany	7	Pakistan	4
Great Britain	6	South Africa	1
India	66	United States	11
International organisations	4		
Total	110		

73 Language-Analysis

There is no need to give a language-analysis of the papers We had received most of the contributions in English, since English is an International language

Some of the contributions were, however, received in German and other languages, which have been translated into English, in order to have uniformity in the language of the *Festschrift*

74 FELICITATIONS

A large number of felicitations have been received both from India and abroad They have been received from eminent librarians and other distinguished personalities and issued separately A geographical-scatter is given below

741 GEOGRAPHICAL SCATTER

Country	*No of Felicitations*	*Country*	*No of Felicitations*
Australia	1		
Austria	1	Israel	1
Canada	2	Japan	5
Denmark	1	Norway	1
Fiji	1	Pakistan	5
France	2	Rhodesia	1
Germany	7	South Africa	2
Great Britain	7	Switzerland	1
India	35	United States	17

Besides the countries listed above, 6 felicitations have been received from international organisations Felicitations have also been received from the national associations of the following countries

- Canada
- Germany
- Israel
- Pakistan
- Rhodesia
- South Africa
- United States
- Yugoslavia

75 DEDICATION AND PRESENTATION

Deutsche Bucherei, Leipzig, has been generous in dedicating a publication in honour of Dr Ranganathan The publication has been received by us Several other publications have been dedicated to him and special numbers of several periodicals have also appeared Publications have also been received from the Director, Yugoslovia State Library

76 BIBLIOGRAPHY

For a number of years, we had been planning to bring out a Bibliography on the writings of Dr Ranganathan Earlier, bibliographies on him and his Colon Classification had already appeared in library periodicals. A complete Bibliography of the works by and on him was felt to be desirable for inclusion in the *Festschrift* Asha Kaula started compiling it, to be included in the *Festschrift* But it was learnt that A K Das Gupta had been already working for some years on this project His Bibliography was very comprehensive and more or less complete. He was kind enough to offer his Bibliography for publication in the *Festschrift*

8 Publication of the Festschrift

The *Festschrift* has been published in two volumes The Bibliography, compiled by A K Das Gupta, was too large to be included in the volume of papers It was, therefore, decided to bring out the *Festschrift* in two volumes making the Bibliography Volume Two Volume One consists of the papers offered to Dr Ranganathan It is divided into 23 parts

9 Acknowledgement

I am grateful to the members of the profession all over the world for their generous response in sending the contributions at short notice Their consent to be associated with this project and also their intellectual and material contributions, have made my task easy But for their generosity, this *Festschrift* would not have achieved an International status I am deeply indebted to all the contributors I am grateful to my colleagues who have assisted me in all possible ways in making my task easy Ramji Singh has willingly offered his assistance in preparing the Index to the *Festschrift* Last but not the least, I am grateful to the librarians in India for their assistance and co-operation My acknowledgements are due in equal measure to R Seshadrinathan and Debabrata Raj of the INSDOC, New Delhi and the Indian Statistical Institute, Calcutta, respectively for translating the articles from German language. I should also record my thanks to the Asia Publishing House for the excellent way in which the volumes have been brought out

CHAPTER A3

Conspectus

P N KAULA

THIS book forms Volume 1 of the *Festschrift*. It has been divided into 23 parts marked A to Y with the omission of I and O. Each part is divided into chapters. The chapters are numbered A1, A2,...; B1, B2,...; Y1, Y2,...The total number of chapters in the volume is 23.

Part B contains chapters on Classification (General theory). Its first chapter describes bibliographical classifications and their possible future. The other chapters mention the philosophical and educational implications of classification and the current trend in classificatory thought. The compatibility of the Colon Classification in relation to another Classification System has been brought out analysing the possibility of the exchange of their notational systems.

Part C deals with the history of the Colon Classification. It begins with a chapter on its genesis and growth. The other chapters deal with its philosophy and its use both for macro-thought and micro-thought. It has also been stated that this scheme should be adopted and developed in future as the national classification scheme of India.

Part D is on Faceted Classification. In this Part, the current trend in classification has been traced and the pattern to be followed by future schemes of classification is indicated. The principle and practice of some of the new schemes of classification have also been given in this Part.

Part E is on Cataloguing (General). It gives an account of the attempts at a Universal Catalogue Code by the IFLA and deals with the complications and problems of cataloguing of documents of corporate authorship.

Part F deals with cataloguing in Japan. All the chapters in this Part have been contributed by specialists from Japan. They have surveyed the position of cataloguing and classification in Japan and suggested the methods by which cataloguing can be simplified and its problems eliminated.

Part G is on Subject Cataloguing. It deals with the latest devices used for deriving subject headings and also the relations between classification and cataloguing. The usefulness of Subject Catalogue against author and title catalogues, what is generally known as a Dictionary Catalogue, has been given. The method of indexing in the field of physical sciences has been demonstrated.

Part H is on Documentation Its first chapter is on the contribution of India to the International Federation for Documentation The standards for documentation established by the Indian Standards Institution have been described Mechanical devices for documentation purposes have also been dealt with. There is a description of the efforts made in India for the training of documentalists.

Part J deals with the Laws of library science In this Part a book is dramatised as paying its homage to Dr Ranganathan for having invented the Laws of library science The scientific method and the description and implications of the Laws have also been described in this part

Part K is on Librarianship The change in the concept of a library from that of a store-house of books to that of a centre for the dissemination of knowledge, its importance as an agency for intellectual advancement, and the basic principles of librarianship have been brought out clearly

Part L describes library movement with special reference to India The history of libraries and their development in India as a whole and in the several States and the role played by Dr Ranganathan have been stated

Part M deals with Library Organisation It traces the history of library legislation in India culminating in the Madras Public Libraries Act passed in 1948 The library development plan for Bombay, as drafted by Dr Ranganathan, has been described The library service to Norwegian seamen and to the islands of Hawaii have been described separately The need for public library cooperation in general and between India and Pakistan in particular have been covered in separate chapters A scheme for book acquisition for Pakistan libraries on the model of the Farmington Plan has been suggested in another chapter

Part N is on university libraries It states the aim and function of university education and the role of university libraries in it. It also states the future of university libraries and gives the picture of an ancient university library in India

Part P deals with library administration It demonstrates the advantages of team-work as practised in the Madras University Library It has chapters on the scientific management of libraries and on the role of the United Nation's Library in promoting understanding among the nations of the world

Part Q is devoted to reference tools and bibliography The history of Encyclopaedia and its future development have been covered in a chapter The need for bibliographies and the technique followed by the Madras State Bibliography have been described in another chapter

Part R is on social education In it the role of Dr Ranganathan in the field of social education has been described

Part S is turned on library education It deals with the history of library education in India and gives a critical analysis of the present system of education Dr Ranganathan's techniques of library education and his methodology of teaching have been described from various angles The influence of Colon

Classification on the teaching techniques of classification in the United States has been very clearly brought out in a chapter

Part T evaluates the work of Dr Ranganathan In this part, the difficulties in understanding the theories of Dr Ranganathan, his unique contributions to every branch of library science, his role as a library-scientist and as a specialist on documentation, and his ideas on library science have been critically examined and evaluated.

Part U evaluates the work and life of Dr Ranganathan in an inseparable way A critical analysis of Dr Ranganathan's life and his work have been given. It also depicts his life and the dynamic role he played in the promotion of library movement in India

Part V evaluates the life of Dr Ranganathan There are certain biographical details about him with various anecdotes An appreciation and a pen-picture about his life in general, with several peculiarities in the way of his living, have been brought out He has been shown as an indefatigable personality, possessing unbounded energy, and a powerful analytical mind He has also been shown as a great public speaker and a writer of library science

Part W gives the reminiscences In this part, there are chapters dealing with one facet or other of Dr Ranganathan's personality Some have described him as a *Karma Yogi*, some as a genius, some as a Master-Mind and some as the greatest thinker on library science in the present century.

Part X gives respectively the list of members of the Ranganathan Commemoration Volume Committee, the contributors to the volume and the chronology of Dr Ranganathan

Part Y gives the Index This Index has been prepared analytically The references in the index have been given to section headings, which have been numbered in decimal fraction notation

Volume 2 forms the *Bibliography of the writings by and on Dr Ranganathan* It is divided into 12 chapters Chapter J forms a Classified Bibliography The other chapters contain the bibliography arranged in other sequences The earlier chapters give a librametric study of the Bibliography

PART B

CLASSIFICATION (GENERAL THEORY)

CHAPTER B1

The Jubilee of the Creator of the Colon Classification

F DONKER DUYVIS

0 Introduction

EVEN if jubilees and celebrations are vain, yet it is worthwhile to mark the dates when progress in the world of thought was achieved, and certainly Ranganathan's life shows such milestones of creative work.

1 Three Schemes

At present three internationally used scientific universal classifications are alive: Ranganathan's Colon Classification, Bliss's Bibliographic Classification, and the Universal Decimal Classification. I think the Colon Classification is the most flexible and the most consequent one in structure; the Bibliographic Classification the most bound to scientific concepts, modern at the time of its creation; and the UDC, the most up to date (or least out of date), thanks to its being the fruit of a large international co-operation of scientists.

2 Bliss Classification

Of these three, the Bliss Classification certainly has the merit (and the weakness) of being an effort of one man of high scientific merit, whose analysis of the requirements any classification should fulfil, is of everlasting value, but whose analysis of modern (at a certain moment modern) science loses its value if no organisation is there to keep it modern. So, apart from its technical classification principles, I am afraid, it will gradually disappear and we should take care that his fundamental rules do not fall into neglect.

3 CC and UDC

I foresee that the Colon Classification and UDC will last longer and I venture to say that they merit not only to last longer but attempts should be made to *combine* their approaches in the long run

4 Philosophical Approach

As said, the Colon Classification is more consequent in its philosophic approach Perhaps the strong stress on the personality approach gives also a physical feature, even a human feature—if I am allowed to say so, and if I may speak of the "character" of a classification, the Colon Classification shows something of the noble character of its creator, who sees and respects the psychical factor in the analysis of the world's phenomena

5 Understatement

Both Colon Classification and UDC show in their names and designation a certain understatement, both designate themselves by some notational symbol which is of no essential value The "colon" as a mathematical symbol is valuable but not essential for the Colon Classification, nor is the decimal notation essential for UDC (which uses some 20 symbols) Most fundamental for both classifications is that both are universal in a true sense, every subdivision may be coordinated with any other, both are multi-dimensional (the Bliss Classification is not, nor are Dewey, Brown, Cutter and other older classifications) One is a Facet classification and the other a Viewpoint classification Then we see that facets and viewpoints to a certain extent are counterparts of one another. In each case features show themselves either from the inside or from the outside of the phenomenon.

51 FIVE FACETS OF CC

Should indeed the twain from East and West never meet ? From Ranganathan, the five facets are far more than basic features of library classification, they surpass the barriers of library science and are fundamental in the broadest way for the phenomenology of the mind

52 FOUR-FOLD ROOT OF UDC

In developing the UDC during the last 35 years, my directing philosophic principles were the "Vierfache Wurzel des Satzes vom Zureichenden Grunde" (fourfold root of the rule of sufficient foundation) of Schopenhauer (for the rest I did not like this morose and gloomy philosopher). Those four roots are subject, object, space and time, from which I developed the point of view common subdivisions, the space and time divisions, sometimes less extensive and exceptionally more extensive than Ranganathan did, whereas the main tables gave object divisions, although the latter always might be used in a subjective sense

6 Difference Between CC and UDC

So in a certain sense, a transfer might be realized towards the 5 facets although the clear separation between Matter and Energy, which Ranganathan has made explicitly, is lacking in UDC (even the divisions 621 0/ 6 are not completely and clearly marked in UDC for showing the Energy facet), whereas the 007 division of point of view, the 08 divisions in social sciences and the general —05 divisions in UDC do not give the integrality of personality divisions to be found in the Colon Classification

61 SIMILARITY BETWEEN CC AND UDC

Nevertheless I see the possibility of finding a closer approach to one another if we find the time to do so by common search Pretty often I was guided by the "triads" of Hegel in trying to find the coherence of thesis, antithesis and synthesis in developing UDC (the positive and the negative approach and the absolute negation), the eastern triads in old Chinese or Indian philosophy and the dualism of the taostic philosophy (Yang and Yin principle as well as the mystical unifying Ch'k principle) This dualism between the active and the passive principle, I find also in the dualistic principle of energy and matter, which I find again in the facets concerned in Ranganathan's analysis Altogether I believe the distance of the two classifications in abstract is not so far and even less than between UDC and the old Dewey Classification which in appearance seems to be so much closer related to UDC and is in fact so in a formal sense

The annexed schematic drawing in various forms I often used before the Second World War in lectures or exhibitions, to explain the "fourfold roots" in a vain attempt to make clear a four dimensional scheme

7 FID/CA

Surely we have in a spiritual sense a stronger relation between CC and UDC, a stronger relation because Ranganathan has been willing to act as leader for the theoretical study of classification in the FID (FID Committee CA)

Here FID owes tremendously to this fertile thinker. In the *Review of documentation* appeared a number of articles and reports (See annex) which were backed by various other studies Ranganathan published elsewhere (See Annexed list of publications of Ranganathan within FID)

8 Qualities of Ranganathan

All those publications show that he possesses

1 the quality of being a trained philosopher,
2 the tolerance and wisdom of a countryman of Gandhi of the best sort, and
3 the knowledge and capacity to bring together and unify the thoughts which have directed the present important classifications

Summarizing, those three characteristics make together Ranganathan and more than that

I know that the task to bring together the two main universal multi-dimensional and dynamic classifications is almost superhuman and I must confess to feel myself unable, even to fulfil it in part But if we can see one in whom we have confidence he will make at least a serious attempt to unify, I think it is our *wise friend from the East*

9 Papers of Dr Ranganathan Written within FID

Annual reports of Dr Ranganathan, Rapporteur of FID/CA

Report 1 General theory of classification—*Abgila* V 2, N 2, June 1951 (reprinted in FID 18th Conference, Rome, 1951, Rapports I, 16 *p*)

Report 2 Optional facets in library classification (9)—*Abgila* V 2, N 7, September 1952, p 173-200.

Report 3 General theory of classification—*Review of documentation* V 20, N 1, March 1953, p 13-18

Report 4 General theory of classification—*FID circular letter F54-40,* May 1954, mimeographed, 14 *p*

Report 5 Mixed notation and zones in an array—*FID circular letter F55-37,* May 1955, mimeographed, 14 *p*

Report 6 Zone analysis and efficiency table—*FID circular letter F56-50,* June 1956, mimeographed, 18 *p*

Report 7. Classification of commodities and services—*FID circular letter F57-72,* August 1957, mimeographed, 4 *p*

Report 8. Classification of environmented entity—*Review of documentation* V 25, N 4, November 1958, p 122-127

Report 9 Classification and retrieval—Problems of pursuit—*Annals of library science* V 6, 1959, p 33-43

Report 10 Telescoping of facets and mixed notation—*Review of documentation* V 27, 1960, p 54-56

Report 11. Facet sequence and telescoping in the schedule, 1961

Other papers by S R Ranganathan published in the FID "Revue de la Documentation"

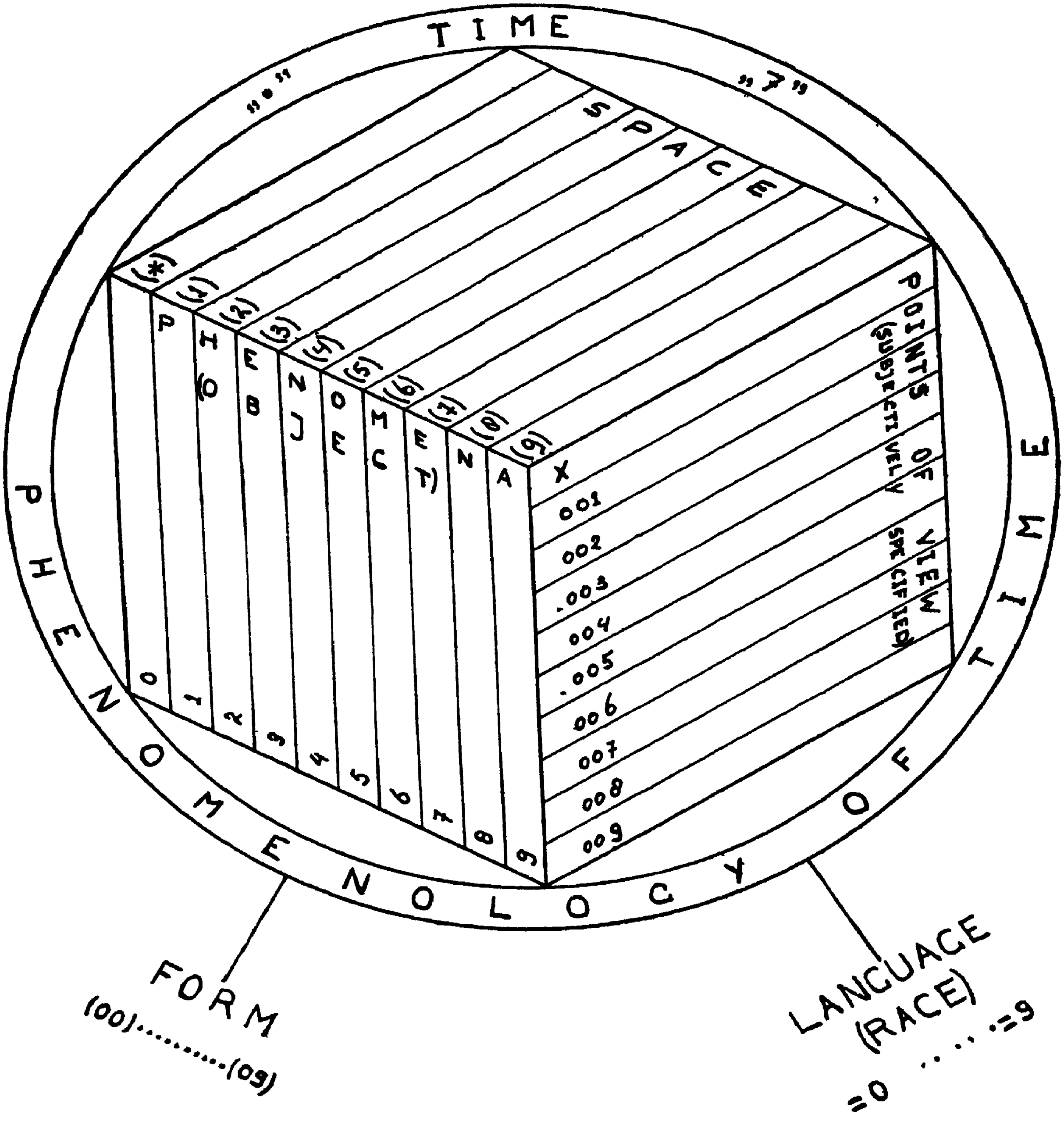
—International summer school on designing of documentary classification—*Review of documentation* V 22, N 3, September 1955, p 95-98.

—Common isolates in documentation work (1): Terminology and anteriorising isolates—*Review of documentation* V 22, N 1, March 1955, p 18-25.

—Common isolates in documentation work (2): Anteriorising isolates—*Review of documentation* V 23, N 2, June 1956, p 43-48.

—Common isolates in documentation work (3): Time isolate—*Review of documentation,* V 23, N 3, September 1956, p 70-79.

—Common isolates in documentation work (4): Space isolate—*Review of documentation,* V 24, N 1, February 1957, p 18-28.


TIME
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009
POINTS OF VIEW
(SUBJECTIVELY SPECIFIED)
PHENOMENOLOGY OF TIME
FORM
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LANGUAGE
(RACE)
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CHAPTER B2

Changing Concepts of Classification: Philosophical and Educational Implications

JESSE H SHERA
AND
JAMES W PERRY

0 Input Information

To THE traditional needs of man for air, water, food, and shelter, Professor Platt of the University of Chicago has added a fifth essential to physical survival, the need for novelty. Every prisoner who has undergone solitary confinement has known the meaning of "stir crazy", but recent experiments in sensory deprivation have shown that men placed in an environment from which a maximum amount of sensory variation had been removed soon came close to the brink of madness. The human being, in both his physical and mental attributes, has not been made to operate in a vacuum. The human brain not only organizes, it exists in order to organize, and it becomes seriously deranged if it is denied the opportunity for organization. The fifth need of man, writes Professor Platt, "is the need for what can be called—in a mathematical sense— "information for a continuous, novel, unpredictable, non-redundant, and surprising flow of stimuli.''[1] This input information constitutes the raw material for organization of sense perceptions into meaningful patterns. This activity of organization of input information not only characterizes the sane mind but also is necessary to maintain its sanity. Without organization into meaningful patterns, sense perception becomes chaos and insanity.

01 MUSIC

Similarly, Leonard Meyer in *Emotion and meaning in music*, sets forth the thesis that formal music is dominated by an inherent intellectual meaning, a meaning that is based on a combination of pattern recognition that alternates between familiarity (repetition) and innovation (surprise). Thus the occidental is unsatisfied by oriental music when first exposed to it because in it he can discover no pattern of familiarity and hence no possibility for surprise, but to one reared in Western culture, Mozart's genius was, as has been said, that he combined the maximum of surprise with a maximum of inevitability.[2]

I Process of New Information

This need of the brain constantly to process new information is not confined to the aesthetic world. It is an inherent characteristic of the nervous system of at least the higher animals, and is part of the process of intellectual growth and learning. A major part of the nervous system is not predetermined at birth but grows continuously under the impact of stimulation and experience—through the organizing and processing of information. Puppies, reared, in so far as possible, in isolation from external stimuli were found to be perceptibly more stupid than dogs raised under "normal" conditions. The brain must constantly process some kind of information; attention may wander but it does not cease. The total capacity for handling information, though it varies from individual to individual and is sharply differentiated between man and the higher mammals, is roughly constant for each individual, like the capacity of a water pipe through which only a given amount of flow can be forced. Moreover, the brain of man and the higher mammals not only structures, classifies, or organizes, the information it receives, it searches for and creates structure and pattern in the environment. The brain, as the psychologist says, has "closure"—the ability to fill in the gap in a pattern—so that a conclusion can be reached despite a missing fragment of evidence. Thus events can be anticipated without having been previously experienced. The lion is in hot pursuit of the antelope, because he perceives in the creature that which is edible, though he may never have seen such an animal before. But to the lion he is "like" that which is known to be edible and hence the anticipation of a hearty breakfast. Conversely, nature in the struggle for survival has deliberately used deception to confuse and promote false analogy and misclassification from fragmentary evidence. Thus crypsis among the insects is a form of camouflage used to deceive the enemy into classifying a potential victim as a leaf or twig. Certain defenceless moths may assume the physical attributes and even the behavior of a wasp to protect themselves from predation.[3]

II ACCRETION OF NEW INFORMATION

Thus the brain "reasons" by clues and analogies, and "solves" problems by their fragmentation into parts sufficiently "familiar" to admit of separate solution. Man uses symbols which are the essence of analogy, and indeed the very nature of man himself as man is this highly developed ability to organize, process, and *learn* information. As this need for information, for something upon which the brain can feed, drives individuals, so also with equal force it drives societies and cultures. It is the basis of all collective behavior for the collective mind operates in the same way as the individual brains of which it is composed, it may learn more slowly, adjust itself less quickly, in short be less efficient in its processing of information, but it is stimulated by the same drives and it operates in the same way A society, therefore, that is to avoid stagnation and decay must provide for the introduction of new information with which the collective mind can nourish itself, just as the individual needs a steady accretion of new information for his mind to process Hence one achieves the paradox that the only stability is in instability, and the only permanence in classification is reclassification

2 Symbolised Thinking

But the mind cannot weave its patterns of information that the senses, through the nervous system, have communicated to it, unless that information is communicated in some form that the brain can manipulate One may question whether every process of thinking involves language, but to conceive of thought without some form of symbolization is difficult if not impossible, and the discussion here can at least be limited to symbolized thinking—to thinking formalized in language Symbols, says Hans Reichenbach, are "first of all, physical bodies, like all other physical things",[4] whether they be words of a printed page, air waves capable of producing the sensation of sound when they strike against the human ear, movements of the human hand or head, or artifacts employed to symbolize a nation, a religious faith, or any form of social organization or concept But symbols are more than physical entities, they are things with *meaning* Meaning, therefore, still following Reichenbach, is a quality imposed on and possessed by symbols The physical things called symbols have a function which they acquire by being put into a certain correspondence with observed facts—a function through which the symbol "operates". This function, or quality, is called meaning In animals, meaning, as the function of symbols, may depend directly upon the correspondence between symbol and the fact for which it stands, at such a stage symbols become essentially signals But in man, and possibly in the higher apes, whether a symbol has the function of meaning does not depend merely on the symbol and the facts in question but also on the use of certain rules called the rules of language The structuring of symbolism into language intensifies the function of meaning Language then becomes a structured body of knowledge symbolized in ways that permit its manipulation by the human nervous system

3 Structure of Language

The system of rules that is the structure of language is not a closed class; man frequently invents new rules for special purposes and for which new symbols are needed. The signs and lights employed for the regulation of motor traffic form a "language" different from ordinary language in its symbols and rules.

Language is, therefore, not only being constantly enlarged or reshaped to meet the requirements of life, but new languages are being invented for special purposes for which existing languages are inefficient or inappropriate

Language, then, is more than a symbolized structuring of knowledge or information Language and knowledge are inseparable If knowledge were not expressible through language so that the human brain could receive it, interpret it, and otherwise manipulate it, the achievement of knowledge would be impossible for man

31 Influence of Language

Because language as symbol epitomizes knowledge, and is the instrument by which the brain is able to comprehend knowledge, language largely determines conduct and behavior Even among primitive races the power of symbols to influence and control action is very great, and as the accumulated body of human experience (knowledge) grows, the role of its structuring becomes increasingly important, making possible both the assimilation of increasingly intricate bodies of knowledge and more complex forms of social organization Because of the ability of man to use symbols to control action, language, or more precisely words, have been endowed with certain supernatural powers Thus incantations and other magical formulas have been employed in an attempt to influence future events, and man has resorted to mystical jargon to exert his will not only upon other individuals but also upon natural forces, physical phenomena, and inanimate objects

4 Structure of Knowledge

The internal structure of knowledge is the system of connections that are patterned in the process of thinking But the psychological operations involved in thinking are fluctuating processes which, under certain conditions, skip entire groups of operations They do not always keep to the ways prescribed by logic, and man in his search for the interconnectedness of ideas cannot bind himself to formalism because the brain itself will not be bound to the narrow steps and prescribed courses of so-called logical reasoning Logic itself is a man-made system of connectives and relationships that has evolved from human experience with observed phenomena And it may be said to inhere in nature only because man chose to put it there The structuring of knowledge that is so essential to the operation of the human brain may have nothing whatever to do with formalized "logic" Indeed, psychologically logic may be quite illogical, and who is to say, in our present imperfect understanding of nature, which is more logical, or more natural, the operations of the nervous system itself, or the patterns that man has woven with it.

41 Scientific Knowledge

Man first found in his environment a heap of disorganized facts or observations. Whether system inhered in it is a matter of debate, but certainly there was no system apparent to him From this rubble he created structure—and eventually science—which at least has utility, for it provided guidance in attacking the problem of survival—and eventually of controlling the environment The structuring of knowledge serves as a framework of reference as a means for grappling with situations by interpreting them as problems that can be attacked by applying previously generated knowledge and by conducting experiments to fill in gaps

5 Creation of a System

It must be recognized, however, that knowledge, including scientific knowledge, is not a system of certainties or well-established statements that steadily advance toward a state of finality Moreover, such scholars as Karl Popper argue that we can never claim to have attained truth "or even a substitute for it, such as probability" [5] Whether Aristotle was convinced that there is an inherent order in nature discoverable by man, and that this order may be expressed as a permanently valid classification system is a matter for debate But certainly such views were widely held for centuries though the orientation shifted as classicism and scholasticism gave way before an evolving science That philosophic contemplation and logical reasoning, as the best approaches to an understanding of nature, yielded to experimental observation and the correlation of results as the primary avenue for man's understanding of the cosmos, is of less importance to the epistemologist in his search for the understanding of the growth of knowledge, than the fact that each age must create its own scheme of classification in terms of its own understanding of human phenomena Thus understanding, or knowledge, itself must create a system, a scaffold, around which it can place the building blocks of experience, inference, and conjecture

51 Order of Classification

Cassirer has criticised Linnaeus for having devised an "artificial" rather than a "natural" classification, a "binary nomenclature" that moves in "the realm of mere names", rather than "in the realm of things", a "mere verbal cloak" [6] But until man has achieved ultimate truth, can a classification be anything but "artificial", or at least relative to the existing state of knowledge ? What is meant by a "natural order" ? Man, himself, is a part of nature, therefore one could argue with equal validity that any order which man has created to expedite his pursuit of knowledge is a "natural" order. Hence Cassirer's statement that "an artificial order cannot be treated as knowledge" is essentially meaningless [7] Under scrutiny it crumbles apart in the fingers To insist that a classifier is moving toward a classification of "names" rather than of "things" is to miss the point both of classification and nomenclature Obviously, to be useful, a classification must have an *inherent* order, but this has nothing to do with its "naturalness" or "unnaturalness" Of necessity a classification is an ordered list of terms, or names, for only in a very limited way can we manipulate objects, and concepts or ideas have no physical existence at all and must be given names The important fact is that the name is the verbal correlate of the class for which it stands, it is the symbolic expression of the class and the members of which that class is composed. Classification can no more escape nomenclature than language can escape symbols.

52 BASIS OF CLASSIFICATION

As Ledger Wood points out, the peculiar characteristic of all knowledge is "that it is always *of* or *about* an actual or supposed object other than itself" [8] Referential transcendence is then, according to Wood, an indispensable feature of all knowledge, and therefore cognitive transcendence always is inherent in the knowledge-situation Classification, therefore, if it is to be useful in the development of man's knowledge must reflect, in a variety of ways, this referential element The concepts with which it deals must refer to each other in ways that are in harmony with or contribute to this knowledge-situation Only thus can classification be useful to the scholar, and the proper object of study of the epistemologist

53 VALUE OF CLASSIFICATION

"The value of classification", writes Jevons, "is co-extensive with the value of science and general reasoning Whenever we form a class we reduce multiplicity to unity, and detect, as Plato said, the one in the many The result of such classification is to yield generalized knowledge "[9] Perhaps no one has more vigorously stated the importance of classification to epistemology than did Professor Bowen, almost a century ago "The first necessity which is imposed upon us by the constitution of the mind itself, is to break up the infinite wealth of Nature into groups and classes Perhaps it will be found that classification is not only the beginning, but the culmination and the end, of human knowledge "[10]

54 TAXONOMY

In one sense Cassirer's critique of Linnaeus is valid, for it is a protest against the extent to which, beginning in the eighteenth and particularly during the nineteenth centuries, classification became identified with taxonomy. At about the same time, it also became something of a plaything of the logicians, who, under the influence of Aristotelian logic, saw it as an instrument for the exercise of man's powers of "reason". To criticize these developments does not deny the contribution that classification can make to scientific description, or the role that reasoning plays in the organization of human knowledge But they did place both science and classification in something of a strait jacket For science is much more than Jevons' "detection of identity," and classification transcends the mere "placing together, either in thought or in actual proximity of space, those objects between which identity has been detected "[11] With the shift in philosophic thought, which is the foundation of science, away from logical contemplation to experimentation, there was not—perhaps because of a curious form of hysteresis that frequently plagues human thinking—a corresponding change in the role of classification Taxonomy and Aristotelian logic had fastened upon classification the notion of a fixed array of specimens that revealed the inherent order in nature, and once discovered remains valid for all time Thus science supposedly supplied the building-blocks with which taxonomy erected a permanent structure

6 Scientific Growth

But there is no permanence in science—no ultimate truth in the absolute sense Of the revolution in scientific thought that has taken place in the first half of the twentieth century, Alfred North Whitehead could say

> "Fifty-seven years ago, it was when I was a young man in the University of Cambridge, I was taught science and mathematics by brilliant men and I did well in them, since the turn of the century I have lived to see every one of the basic assumptions of both set aside . The most fundamental assumptions of supposedly exact sciences set aside And yet, in the face of that, the discoverers of the new hypotheses in science are declaring, 'Now, at last, we have certitude'—when some of the assumptions which we have seen upset, have endured for more than twenty centuries "[12]

61 Ranganathan's Unique Analysis

One cannot condemn the taxonomists for building their structures with bricks of straw, these were all that science gave them. But they should not have deceived themselves with the illusion of permanence merely because they had erected a pretty pyramid in which each block had its "proper" place This "logic of taxonomy" has been doubly unfortunate, not only because it has tended to ossify classification into a rigid and supposedly permanent hierarchy, but also because it has obscured the larger and far more important contribution that classification can make to epistemology. To the librarian, this double misfortune has been particularly deplorable Taxonomic classification, by providing him with an array of pigeon-holes into which he could conveniently slip his books or cards, has given him a false sense of security with respect to the retrieval of information At the same time he has been led away from epistemology, which is the true foundation of library science as the management of recorded knowledge Of all librarians, only S R Ranganathan has attempted to build a bibliographic classification upon epistemological principles By demonstrating the ways in which knowledge grows—by "denudation, dissection, lamination, and loose assemblage"[13] he has clearly shown the relation between bibliographic classification and the patterns of man's cognitive growth

62 Referential Classification

Thus, through the influence of this distinguished Indian scholar and those who have followed, or been inspired by his teachings, librarianship is entering a new era in classification, a transition in which the old rigidity and assumed permanence of taxonomic grouping is giving way to what Whitehead has called a "referential" classification—a dynamic and flexible system, or more specifically a network of inter-related systems, that will give new dimensions to the organization of recorded knowledge No longer will bibliographic classification be tied to the linearity of the book-shelf or the catalog tray, but in time there will emerge systems that will be capable of indefinite expansion which will make possible an unlimited variety of correlations, and provide for a much more minute analysis of the materials classified than has ever been possible before The old dichotomy between a classification of books and a classification of knowledge will disappear, and in its place there will be thought patterns that simulate the mental processes or channels of the library user As man's understanding of the growth of knowledge increases, and he learns more about the operation of the nervous system especially the brain, and the ways in which we "think", he may be able even to provide for serendipity

63 Potentialities of Facet Analysis

Librarianship has not consciously assumed a static state of knowledge but its conservative adherence to traditional techniques has resulted in such an orientation Excessive preoccupation with form, often, it must be admitted, for its own sake, has laid a heavy hand upon the librarian and rendered him immobile in the face of scientific (*Wissenschaftliche*) progress To a world bound to the formalized structure and the growing obsolescence of the Decimal Classification, a world that had not been liberated as it should have been by the even less flexible system designed for the Library of Congress, faceted analysis came as a breath of fresh air So great was the significance of this innovation that its potentialities were not—perhaps could not be—immediately realized At the time of its introduction the librarians were not ready for it, but its importance is becoming increasingly recognized by those who are seriously concerned with the retrieval of information In library practice, facet analysis has opened the door for the introduction of electronic technology, popularly known as machine searching This has made possible a far greater depth of literature searching than could ever be achieved with a traditional card catalog of manageable proportions The faceted approach has expanded to almost limitless boundaries the range of questions that the reference librarian can ask, and for which answers can be achieved with speeds that to an earlier generation would have been beyond belief The opportunities for mechanization which the faceted approach revealed has revolutionized the total cost structure of library service by making possible an intensity of literature search that previously would have been beyond the limits of economic practicability even for the largest libraries Far from making the librarian an automation, a "slave to the machine", it promises him a new freedom, a mastery over his materials that he has never enjoyed before

7 Ranganathan's Theory of Librarianship

But important as these practical ends are, the great contribution of Ranganathan's methods lies in the theory of librarianship itself As was suggested above, facet analysis derives from Ranganathan's investigations into the way in which knowledge grows, and in his work for the first time, librarianship, as the science of the management of knowledge, merges with epistemology This distinguished Indian philosopher found librarianship little more than a bundle of techniques, a rather simple technology, and he, and his followers, have raised it to an intellectual discipline in its own right Thus he has laid the theoretical foundations upon which others can build Important as the Colon Classification is as an exemplification of his theories, one may hazard the not unreasonable guess that it is the theory upon which the scheme is based that will survive and stimulate the minds of future generations long after the ingenious scheme itself has been superseded Epistemology decrees that each age must fabricate its own classifications, but the epistemological foundations of those classifications are constant

"The One remains, the many change and pass " Philosophy is still the "pilot of life"

8 Librarianship—an Intellectual Discipline

The implications of these changing concepts in the organization of knowledge are no less important for the education of the librarian That library education has so long remained at the vocational level is due to misunderstanding of librarianship and a misuse of education. The failure to see librarianship as anything other than a technology has made its training programs little more than the communication of vocational skills. This has been intensified by the failure to see education as anything other than compressed experience. But librarianship can be an intellectual discipline in its own right, and education is not a substitution for experience, but a preparation for it. There is no substitute for experience, and the only way to obtain it in a specific activity, is to engage in that activity Hence professional education is particularly vulnerable to the encroaches of apprenticeship and practical training Librarianship, if it is ever to become anything other than a vocation, must abandon the practice of putting its students through what Robert M Hutchins has called, "little fake experiences in the classroom"[14] We must teach our pupils theory, not techniques, principles rather than practice

91 Profession vs. Vocation

The practitioners who set themselves up as authorities in professional education—and every practitioner does—constantly cry for initials into the profession who know *how* to do this or that, never *why* they do it If one elects to spend two years of professional "study" learning how to classify by the Decimal system, then suddenly finds himself employed in a special library for which the DC is completely unfitted, he will be lost But if he has spent his years of education preparing himself to comprehend the theory of classification, he will be able to work out his own formulas for either the Decimal system or any other that he might encounter or fabricate Similarly, the teacher who teaches only "facts" or techniques, may one day awaken to the *fact* that the world has gone on without him, and that his students have passed him by But we are less concerned with the personal tragedy of the individual teacher than the greater tragedy of the profession For a profession that pins its hopes in a technology is not truly a profession, it is a vocation and a very ephemeral vocation as that.

92 Educational Librarianship

Librarianship stands in such a perilous position at this very moment Because it has put its faith in a technology, it rejects innovation, recoils from self-scrutiny, and babbles incoherently of "fright and frankenstein", when confronted by "a machine" This fear of the machine is a normal reaction against what Robert M Hutchins has called "the cult of scientism,"[15] a cult that has done great disservice to science, and one which few good scientists follow At the beginning of this essay, we spoke of man's need for information, and because the world presents itself to us as a mass of incomprehensible items, we are led to the worship of information by the simple process of collecting facts and subjecting them to examination This, according to John Dewey, is still the curse of education, particularly in the social sciences But man cannot understand the environment merely by looking at it One of the primitive assumptions of science is that we live in a universe of order, an order that is determined by and controlled through the operation of certain fundamental principles that admit of reasonably exact definition and yield ultimately to elucidation. Thus man reaches the conclusion that there is a body of universal laws that can be grasped by the human intellect and utilized effectively in the solution of human problems. One cannot quarrel with this view, for it emphasizes anew the need of education to deal with these basic metaphysical problems, rather than with facts alone. But at the same time, this intensive inquiry into the nature of the environment had led to a blind devotion to the fact for its own sake. Thus has arisen the cult of scientism which holds that everything that is not science is antiquated and irrelevant, for science is modern, enlightened, and progressive. Paradoxically, this has also led to an equally irrational rejection of science, because "science cannot tell us where to go". Because men can use science for evil purposes as well as for good, there has grown up a popular distrust of science, a belief that science itself will lead man to destruction, an anti-intellectualism that holds that too much knowledge, like a little knowledge, is "a dangerous thing". If a government exists by the consent of the governed, a society or a profession will become subservient to the machine only when it places a higher value on a technology than it does on creative thought. The goal of education is not the assimilation of facts or the building of a machine, but the training of the intellect. Therefore, the aim of education for librarianship is the training of the intellect in matters pertaining to human knowledge. Librarianship is not a trick of finding a particular book on a particular shelf for a particular reader. Of all the disciplines, it is the broadest and richest—the most interdisciplinary. It reaches to the very center of man's intellectual achievements, and seeks to understand the relations of the parts to the whole of human knowledge. If librarians fear technological advance it is because they have been schooled in a vocational technology that seeks not the understanding of man's intellectual achievements but the manipulation of a set of skills.

93 **Future Librarians**

Librarians are wont to lament the failure of their profession to attract "bright" young people into its ranks. But, far too often, "the sheep look up and are not fed". Two hours in the library school classroom are ample to demonstrate how serious this intellectual starvation can be. One does not nourish an active mind by stuffing it with rules. Man needs not only novelty—information—but improvement. He seeks not a different society but a better one. Only those who recognize the important place that librarianship holds in the wisdom of the race can hope to contribute to the proper education of the librarian. Only such as they will be able to attract to the profession those "bright" initiates who see in librarianship an important role in the improvement of mankind and who want to share in it. The sheep look up and must be fed.

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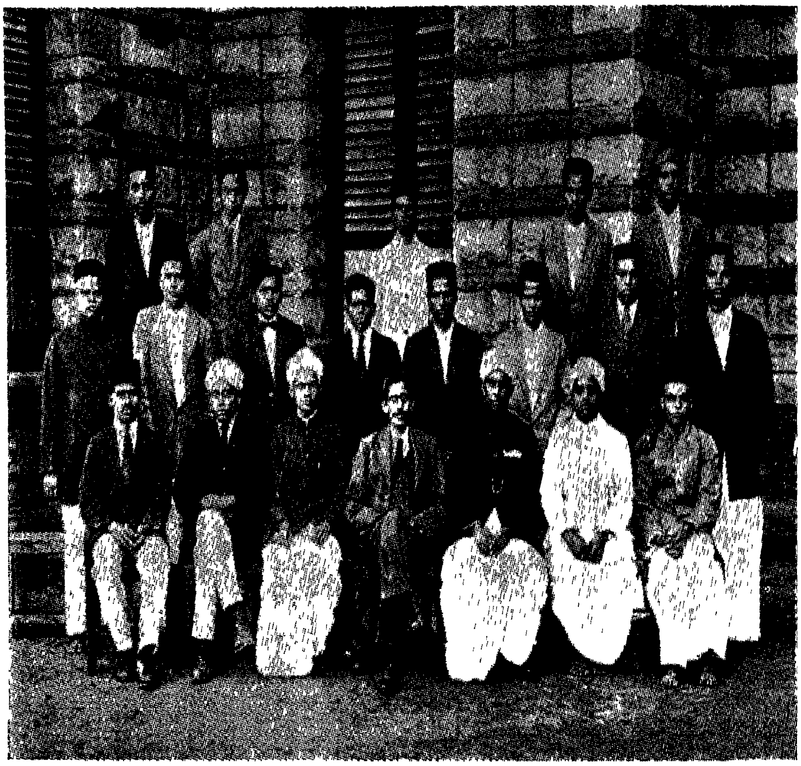
CREATOR OF A NEW ERA IN LIBRARY SCIENCE

Dr S R Ranganathan

(His 71st birthday was celebrated locally, regionally, nationally and internationally throughout the world in 1962)

ON THE EVE OF LIBRARY CAREER

Presidency College, Madras (1923-24)

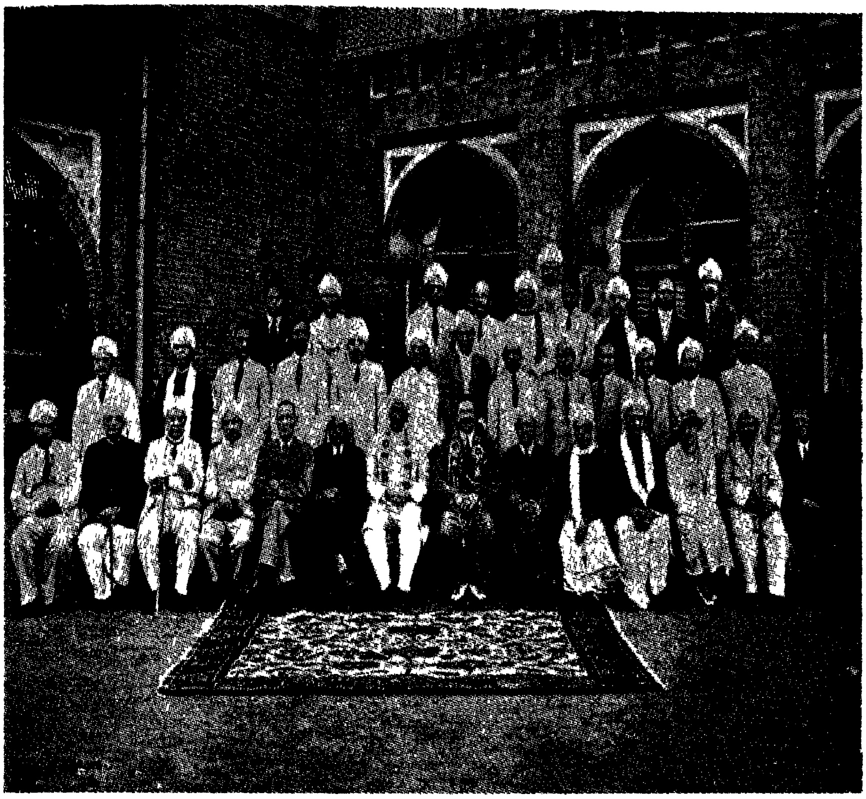


(*L to R*) *Sitting*: 2 Prof S R Ranganathan, 3 Prof G A Srinivasan, 5 Prof K Ananda Rao, 6 Prof P V Sheshu Iyer, 7 Prof N Raghunathan.

Standing: 1 T Vijya Raghavan (*First Ramanujan Prof of Mathematics*), (Top) 2 C T Rajgopalan (*Second Ramanujan Prof of Mathematics*)

INAUGURAL FUNCTION OF THE MADRAS LIBRARY ASSOCIATION

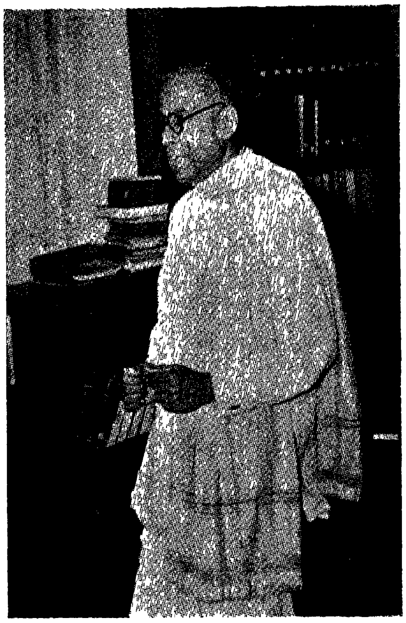
(1935)



(*L to R*) 3 Sir P S Sivaswami Ayyer (*Ex-Member of the Executive Council, Madras*) 4 Justice Sir V Ramesham, 5 H Champion (*DPI, Madras*), 6 Dr S R Ranganathan, 7 Sir C V Raman (*Chief Guest*), 8 Lord Erskine (*Governor, Madras*), 9 Rao Bhadur K V Krishnaswami Ayyer (*President MLA*), 10 Sir Alladi Krishnaswami Ayyer (*Advocate General*), 11 Justice Bashim Ayyangar, 13 T K, Rajagopala Ayyar (*Accountant General, Madras*), 14 Dr F H Gravely (*Museum Superintendent*)

VISITING PROFESSOR IN THE BOMBAY UNIVERSITY LIBRARY

(1944)



Explaining the "Principles of Helpful Sequence" in classification.

INAUGURATION OF THE DOCUMENTATION RESEARCH AND TRAINING CENTRE

Bangalore (1962)

A Neelameghan (*Reader*), Nagabhushana (*ISI*), Justice Srinivasa Rau (*Chief Justice, Mysore*), Dr C D Deshmukh (*Vice-Chancellor, Delhi University*), Dr S R Ranganathan

INAUGURATION OF THE DELHI LIBRARY ASSOCIATION

(August 1953)

Speaking: Ch Brahm Prakash, M P (*Chief Minister, Delhi State*)

Sitting: (R *to* L), Dr S R Ranganathan, Miss Shanta Vashist (*Deputy Minister for Education, Delhi*), P N Kaula (*Founder and Convener*), Mrs Sarada Ranganathan (*Sixth from right*)

UNESCO'S INTERNATIONAL SCHOOL FOR PUBLIC LIBRARIANSHIP

Manchester (1948)

Faculty Members (*L to R*) 5 Prof Dr L Carnovsky (*United States*), 7 Prof Knowell (*Great Britain*); 9 Prof Arne Kildal (*Norway*), 10 Prof Dr S R Ranganathan (*India*); 11 Prof Depasse (*Belgium*)

AWARD OF "D LITT" BY THE UNIVERSITY OF DELHI

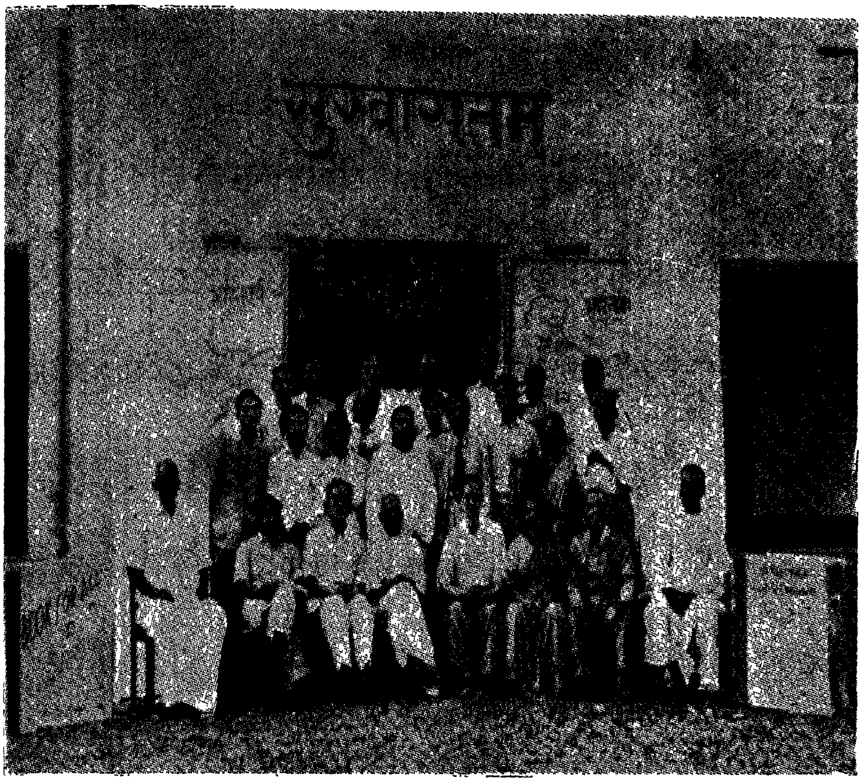
Special Convocation (1948)

(*L to R*) *Sitting*: 1 Sir S Varadachariar (*Judge, Supreme Court of India*); 2 Rajkumari Amrit Kaur (*Minister for Health, Govt of India*); 3 Pandit Jawaharlal Nehru (*Prime Minister of India*). 4 Lady Mountbatten, 5 Lord Mountbatten (*Governor General of India*), 6 Sir Maurice Gwyer (*Vice Chancellor, Delhi University and Chief Justice of India*); 7 Maulana Abul Kalam Azad (*Minister for Education. Govt of India*), 8 Sir S S Bhatnagar (*Secretary, Ministry of Natural Resources and Scientific Research*) 9 Justice Vardachariar (*Supreme Court of India*)

Standing. 2 Dr V K R V Rao (*Director. Institute of Economic Growth*, currently *Member, Planning Commission*), 3 Dr Zakir Husain (*Vice President. Republic of India*). 4 Dr S N Sen (*Ex-Vice Chancellor. Delhi University*), 5 Sir Taylor (*Director General of Archaeology of India*), 6 Mr R Ratnam (*Ex-Rector, University of Delhi*); 7 Dr K S Krishnan (*Director, National Physical Laboratory*), 9 Dr Thadani (*Principal Hindu College, Delhi*), 10 Dr S R Ranganathan, 11 T P S Iyer (*Registrar. Delhi University*)

INITIATION OF THE ASIAN FEDERATION OF LIBRARY ASSOCIATIONS

(1951)

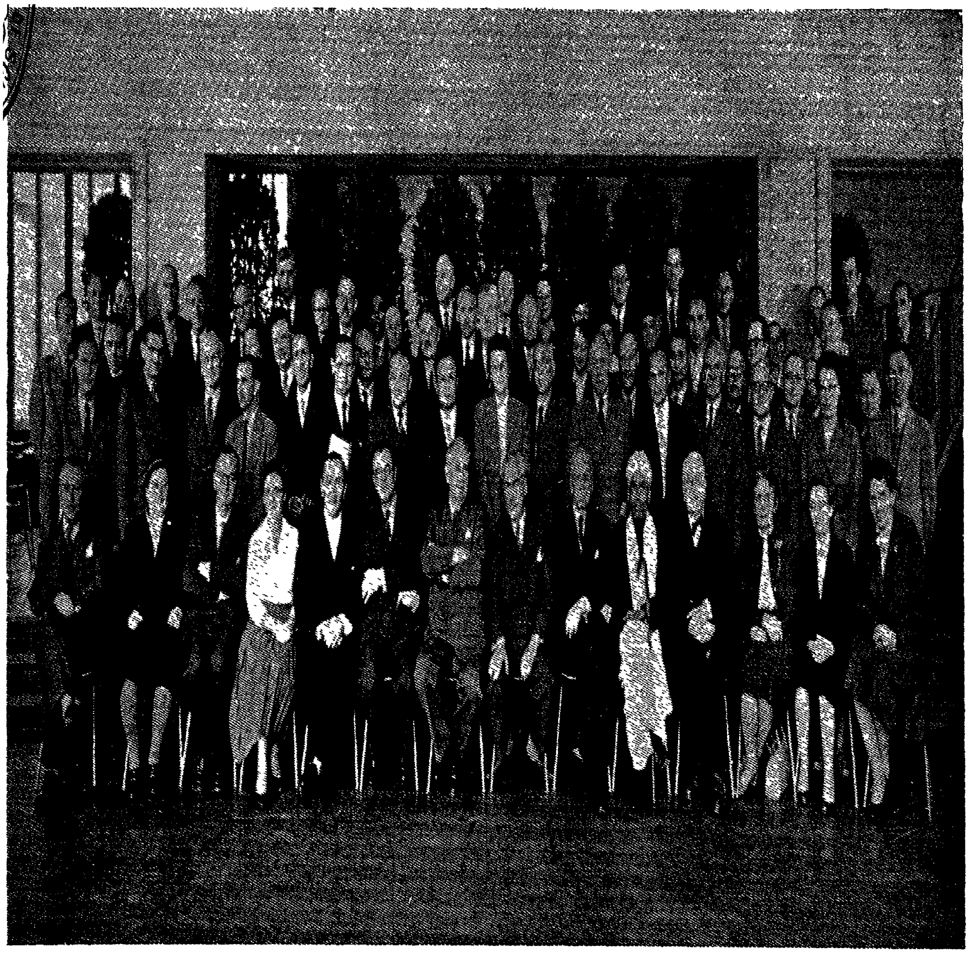


(*L to R*) *Sitting* R Srinivasan (*Treasurer, ILA*), D D Gunasekara (*Senate Librarian, Ceylon*), R Patah (*Librarian, National Library, Jogjakarta, Indonesia*), Dr S R Ranganathan, (*President, ILA*), Harufumi Kondo (*Chief, Social Education Facilities, Ministry of Education, Tokyo, Japan*), Dr S A Chitale (*DGHS, India*), F M Hadi (*Kementarian Penerangan, Indonesia*), T C Dutta (*Bengal Library Association*)

Standing 1 (*Japanese delegate*), 4 V S Moghe (*Madhya Bharat*), 7 S Rambabhadran (*Delhi University*), 8 Nabi Ahmed (*Jamia Millia*), 9 A K Mukerjee (*Jadavpur University*), 10 T N Koranne (*Indore*), 11 S Das Gupta (*Secretary, ILA*), 13 P N Kaula (*Secretary of the meeting*), 14 Nilima Das Gupta (*CSL*), 15 S Bhatwedekar (*DPL*), 16 (*Overseas delegate*), 17 S Bashiruddin (*Aligarh University*)

INTERNATIONAL FEDERATION OF LIBRARY ASSOCIATIONS

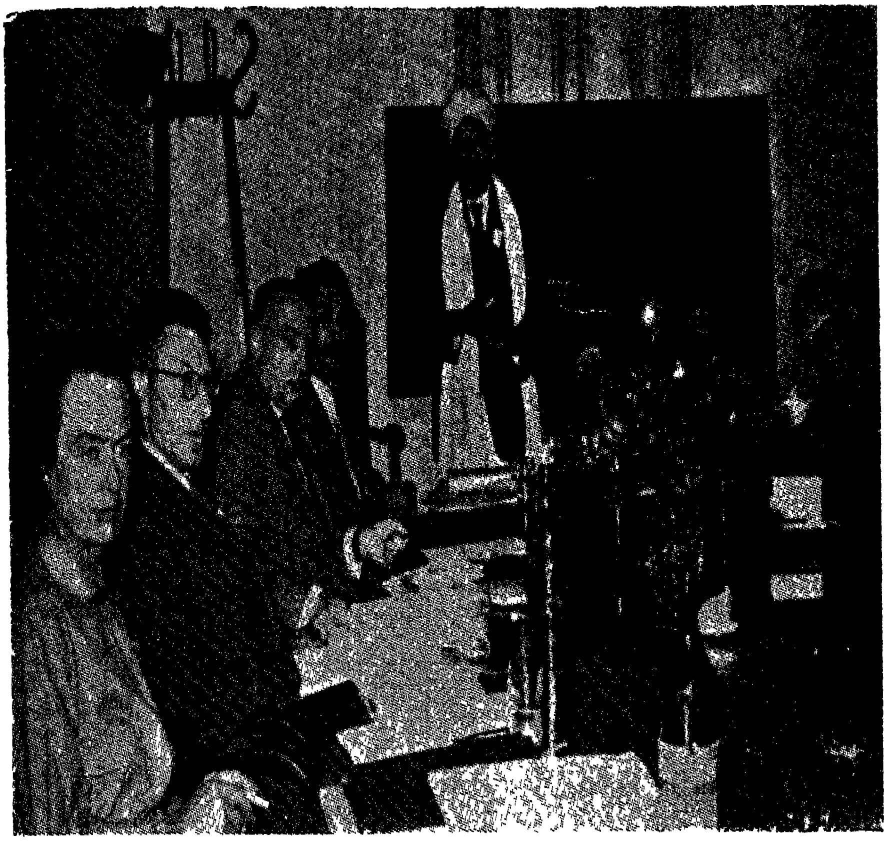
Zagreb Conference (1954)



(*L to R*) 5 Dr Hoffman (*Librarian, State Library Munich*), 7 Dr Munthe (*President, IFLA and Director, National Library, Norway*); 8 Dr P Bourgeois (*Past President, IFLA* and *Director, National Library, Switzerland*); 10 Dr S R Ranganathan; 11 Dr J Cain (*Director, National Library. France*)

F I D COMMITTEE ON GENERAL THEORY OF CLASSIFICATION

Belgrade (1954)



Dr S R Ranganathan addressing the meeting of FID/CA (*Committee on General Theory of Classification*) at Belgrade on 17 May, 1954. Second from left is Sir Frank Francis (*Director, British Museum, London*).

GREAT MINDS ON LIBRARY SERVICE

Dr S R Ranganathan with Dr C D Deshmukh (*Vice Chancellor, Delhi University;* Formerly, *Finance Minister, Government of India* and *Chairman, University Grants Commission*)

TOUR OF THE BRITISH LIBRARY SCHOOLS

London (1954)

Dr and Mrs Ranganathan at the North Western Polytechnic Library School, London. J Mills, (*Lecturer of the School*) is on the left of Dr Ranganathan

GERMAN CULTURAL SOCIETY

Stuttgart (1959)

A discourse on the *Ramayana* by Dr S R Ranganathan

WORLD CONGRESS OF LIBRARIES AND DOCUMENTATION CENTRES

Brussels (1955)

Attending the Congress International des Bibliotheques at Brussels from 11-18 September, 1955. Dr H Coblans (*FID, Cern, Geneva*) is on the right of Dr Ranganathan.

LIBRARY SCIENCE ON THE MARCH

Discussions in Morning Walks

Dr Ranganathan discusses library problems with his students at D R T C during his morning walks in Bangalore.

GERMAN LIBRARY CONFERENCE

Dusseldroff (1955)

Some of the delegates to the German Library Conference at Dusseldroff with Dr S R Ranganathan.

RECEPTION BY THE LIBRARIANS OF DELHI

(1957)

(*L* to *R*) Dhanpat Rai (*Defence Science Organization*), K Sood (*Subash Bros*) S R Mittal (*National Council for Basic Education*), P Maheshwari (*Delhi Public Library*), N K Goil (*Economic Growth*), Asha Kaula (*National Council for Fundamental Education*), Mrs Gauri Shankar, Deputy Mal Jain (*Senior Vice President, DLA*), R K Khoda (*Federation House*) Sarada Ranganathan, J Smeaton (*British Council*), O P Trikha (*DPL*), Dr S R Ranganathan Brahm Prakash, M P (*President, DLA*), Tek Chand (*Commerce College*), P N Kaula, Gopi Nath (*Supreme Court*), V Menon (*Inderprastha College*), Kamala Kapoor (*USIS*), K L Bhatia (*Hans Raj College*), Shanta Vasisht, M P (*Ex-President, DLA*), Gian Chand (*Central Secretariat Library*), Gupta (*Finance Ministry*), Om Prakash (*Hardinge Public Library*)

NATIONAL RECOGNITION

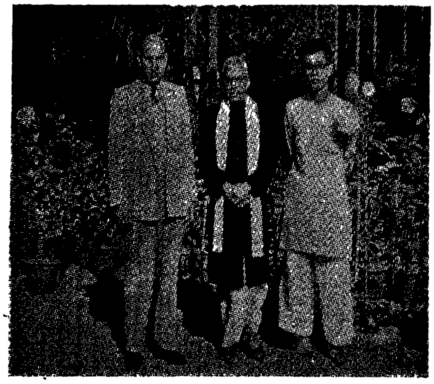
AWARD OF "PADMASHRI"

(1957)

Dr Rajendra Prasad, President, Republic of India, awarding "*Padmashri*" to Dr S R Ranganathan.

WITH A JAPANESE SCHOLAR ON LIBRARY SCIENCE

Calcutta (1961)



P N Kaula, Dr S R Ranganathan, and Kenijiro Matsutani.

LADY WITH A LARGE HEART

Mrs Sarada Ranganathan

(Library Science is their eldest son)

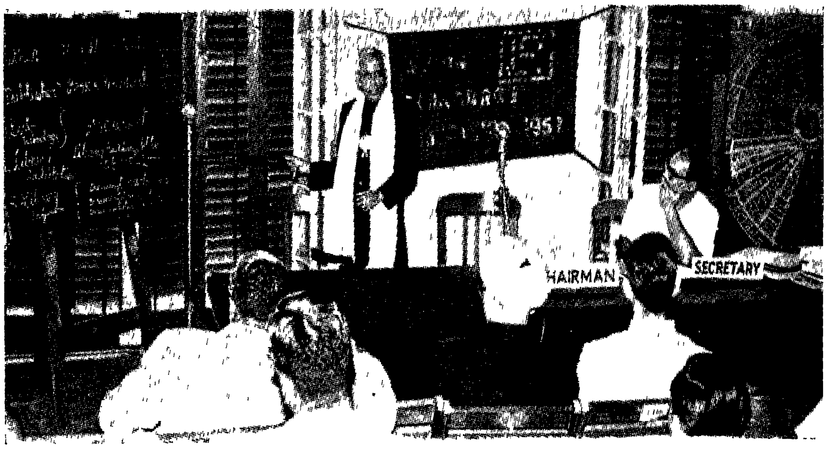
RECEPTION ON THE AWARD OF "PADMASHRI"

(1957)

(*L to R*) S Das Gupta (*Librarian & Head of the Dept of Library Science Delhi University*), E D Jayaram (*Law Officer, CSIR, New Delhi* and *Senior Vice-President, DLA*), Shanta Vashist, M P (*President, DLA.* Formerly *Deputy Minister for Education, Delhi State*); Dr S R Ranganathan; M Anantasayanam Ayyangar (*Governor, Bihar*, Formerly *Speaker, Lok Sabha*) Dr K S Krishnan (*Director, National Physical Laboratory*); Deputy Mal Jain (*Vice-President, DLA*) Prof P K Kichlu (*Professor of Physics. Delhi University*, Currently *Director, National Physical Laboratory, New Delhi*

DOCUMENTATION SECTION OF THE INDIAN STANDARDS CONVENTION

Madras (1957)



Dr S R Ranganathan (*Chairman*) addressing the Convention on Documentation and Standardisation Jainath Kaul (*Chief Editor, Indian Standards Institution and Secretary*) is on his left

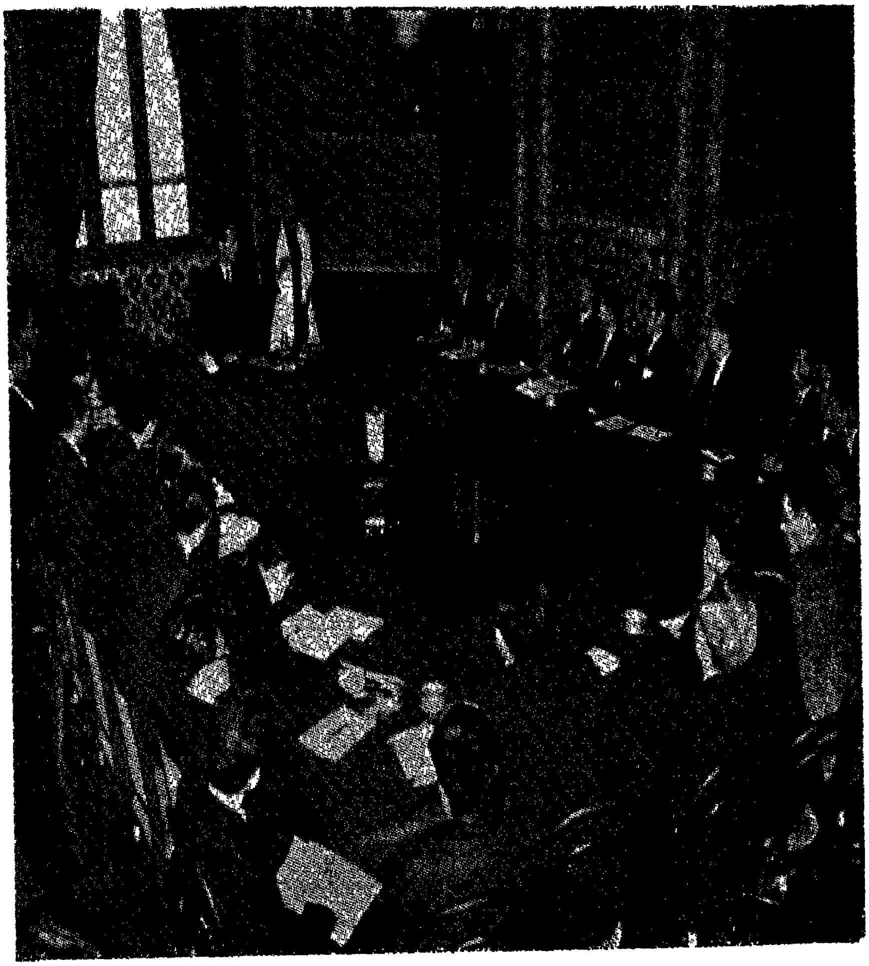
ADDRESSING THE LIBRARIANS OF MOSCOW

Lenin State Library (1959)

Dr S R Ranganathan explaining "Facet-Analysis" in classification.

ADDRESSING THE LIBRARIANS OF JAPAN

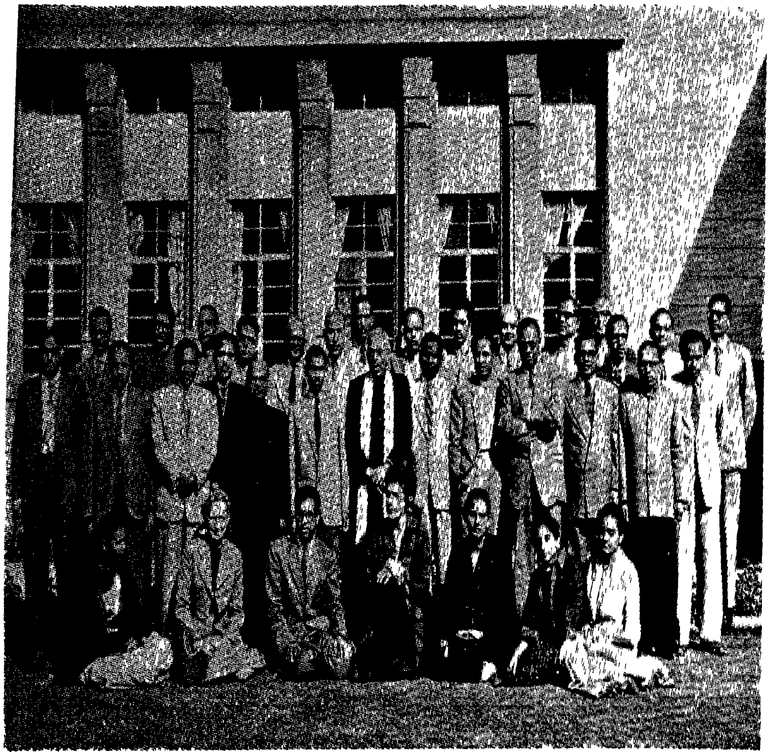
(1958)



Speaking on the "Revolutions in Library Science" to the librarians of Japan in the National Diet Library, Tokyo

RESEARCH IN THE SOCIAL SCIENCES

Library Seminar (1959)



(L to R)
Sitting S Ashraf (*ICWA*), Beatrice Holt (*Cultural Officer, US Wheat Loan Office*), Girja Kumar (*ICWA and Secretary*), Sara M Dilly (*USIS*), Kamala Kapoor (*USIS*), V Sahai (*ICWA*), U Kapoor (*ICWA*)

Standing: S Ansari (*Delhi School of Economics*), O S Sachadeva (*CSL*), B C Tiwari (*ICWA*), R S Goyal (*DPL*), B L Bharadwaja (*Planning Commission*), Surendar Nath (*CSL*), N M Ketkar (*CSL*), N C Chakravarty (*Finance Ministry*), J Saha (*ISI*), P N Kaula (*Delhi University*), K S Dalal (*Delhi University*), Dr S R Ranganathan (*Director, Seminar*), S P Kulshrestsh (*Labour Ministry*), V Sundaram (*Labour Ministry*), P K Garde (*Ecafe*), S Das Gupta (*Delhi University*), L G Parab (*Archaeological Dept*), B Sen Gupta (*National Library*), M M L Tandon (*DPL*), M N Nagaraj (*National Library*), H M Kulkarni (*Applied Economic Research*), T R Shah (*Unesco*), S P Phadnis (*CSIR*), S N Raghav (*ICCR*)

EXPLAINING POSTULATIONAL APPROACH TO CLASSIFICATION

Library Study Circle, (1960)

Sitting (L to R)

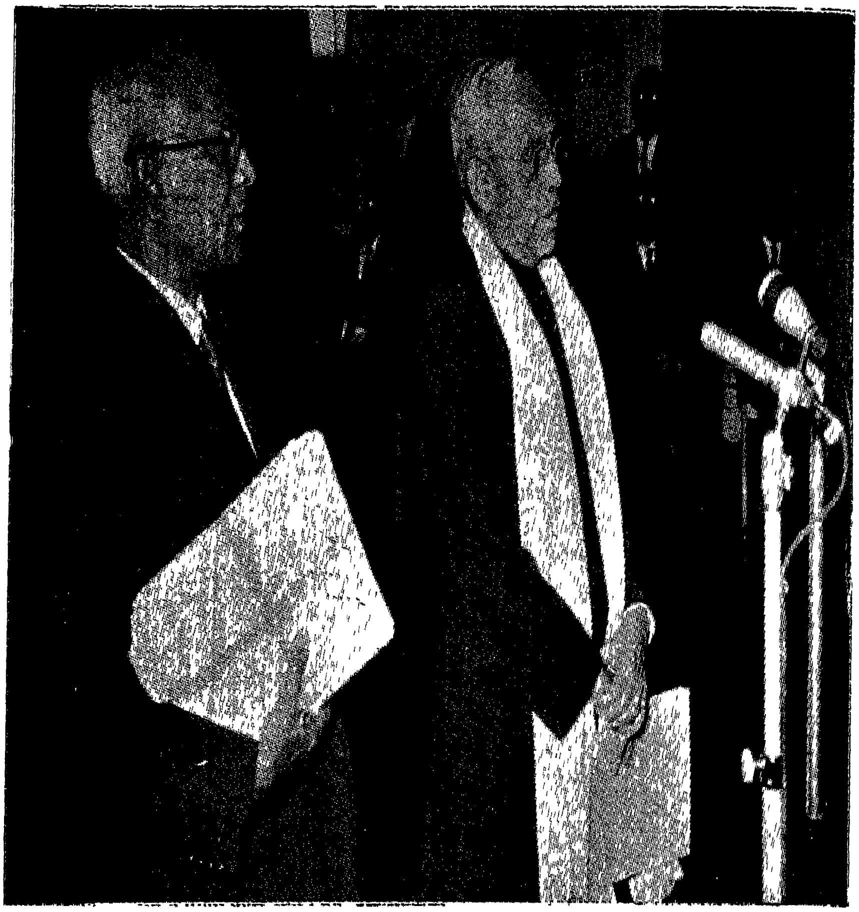
Dr S R Ranganathan, Dr Ruthermond (*German Embassy*), Dr Voigt (*Department of German, BHU*), P N Kaula (*Librarian & Head of the Dept of Lib Sc, BHU*), L S Shukla (*Lecturer in Lib Sc, BHU*), Mrs Asha Kaula, B N Ghatak (*Deputy Librarian, BHU*), M Rajbee (*Asstt Librarian, BHU*)

Standing (L to R)

Virendra Kumar (*Central Sectt Library New Delhi*), G G Gurjar (*BHU*) A P Tripathi (*Medical College, Kanpur*), M S Srivastava (*Dairy Research Institute, Karnal*), A Jha (*Sanskrit University*), Maya Chakravarty (*BHU*), Reba Roy (*Orissa*); G N Vyas (*Central Library Bhopal*); K Sivaraman (*Allahabad University*), S K Srivastava (*Lucknow University*), T Khosla (*Miranda House, Delhi*) S P Srivastava (*Allahabad University*); L M P Singh (*BHU*), R A Lal (*BHU*), P N Ganjoo (*Kashmir University*), D D Agarwal (*H C College, Varanasi*), Om Prakash (*Women's College, Amritsar*)

INDIA'S FELICITATIONS TO THE NATIONAL LIBRARY

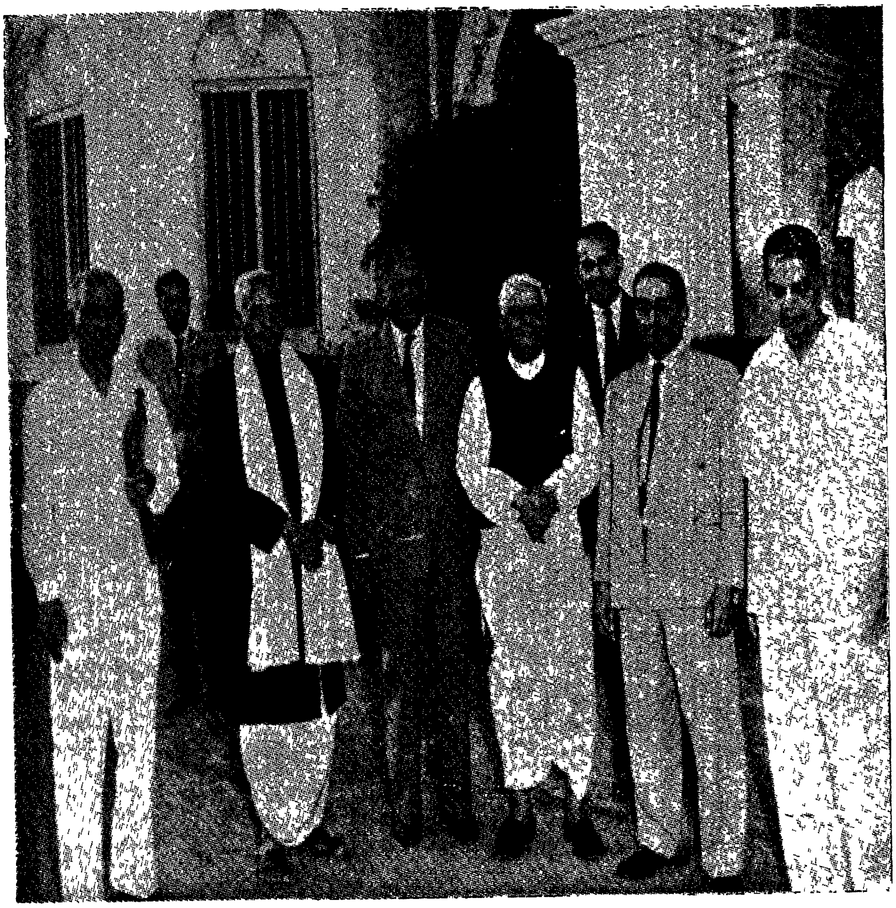
Berlin (1961)



Dr S R Ranganathan offering India's felicitations to the National Library, East Berlin at its Tercentenary in 1961. Prof S Bashiruddin, Director & Head of the Dept of Library Science, Rajasthan University also attended the celebrations on behalf of India.

ALL INDIA SEMINAR ON SCHOOL LIBRARIES

(1962)



(*L to R*) G M Patil (*Asstt Curator of Libraries, Mysore*), Dr S R Ranganathan, Dr Menon (*Director of Extension Services, Govt of India*), R R Dewakar (*Ex-Governor of Bihar*), Devi Gowda (*Director of Public Instruction, Mysore*), M R Narsimha Iyengar (*Ex-Member, City Corporation, Bangalore* and *Secretary, Mysore Library Association*)

DOCUMENTATION RESEARCH AND TRAINING CENTRE

First Batch of Trainees with the Governor of Bihar

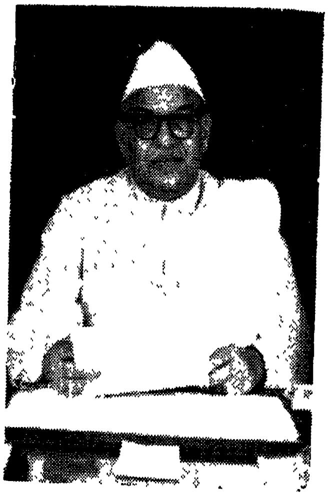
(*L to R*) *Sitting*: 1 Mr M R Narsimha Ayyangar (*Warden and Secretary, Mysore Library Association*), 3 Hon'ble M Ananthasayanam Ayyangar (*Governor, Bihar and Chairman, Ranganathan Commemoration Volume Committee*), 4 Dr S R Ranganathan (*Hon Professor*), 6 A Neelamegham (*Reader*)

Standing. B Prasad, B S Mane, C V Suba Rao, M V R Rao, Dinesh Elhance, D N Gupta, A S Raizada, G K Arora.

CONFERMENT OF D LITT BY THE UNIVERSITY OF PITTSBURGH (USA)

Recipients of *D Litt* Degree with Dr E Litchfield, Chancellor of the Pittsburgh University (Centre). (*Left to Right*) Dr L Quincy Mumford (*Librarian of Congress*), Dr S R Ranganathan, Dr E Litchfield, Dr C E Shannon, Dr W Weaver (*Vice Chancellor of the Pitt*)

CHAIRMAN OF THE INTERNATIONAL COMMITTEE



Mr M Ananthasayanam Ayyangar (*Governor of Bihar*, Formerly *Speaker, Lok Sabha, New Delhi*) He acted as the Chairman of the Ranganathan Commemoration Volume Committee

NATIONAL SEMINAR ON DOCUMENTATION DRTC
(5-10 JUNE 1963)

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WITH THE FACULTY OF THE GRADUATE SCHOOL OF LIBRARY & INFORMATION SCIENCES, UNIVERSITY OF PITTSBURGH (JUNE 1964)

Sitting (L to R) Miss Elizabeth Nesbitt, Dr S R Ranganathan, Mrs Jean Adelman
Standing (L to R): Dr Nasser Sharify, Assistant Dean J Clement Harrison, Dean Harold Lancour, Dr A D Osborn, Mr Norman Horrock

THE MASTER AND THE EDITOR

Dr S R Ranganathan with Mr P N Kaula (*Visiting Lecturer at DRTC*) at Bangalore in October 1962

AMERICAN SEMINAR ON LIBRARY SCIENCE (1964)

Dr S R Ranganathan engaged in a discussion with a Seminar Group at the Graduate School of Library and Information Sciences, University of Pittsburgh, Pittsburgh (USA)

TRAINING OF DOCUMENTALISTS IN INDIA

Dr S R Ranganathan training the students in Documentation at the Documentation, Research and Training Centre, Bangalore of which he is the Hon Professor.

CELEBRATION OF SEVENTY FIRST BIRTHDAY
VARANASI (1962)

Mr Anis Khurshid (*Head of the Department of Library Science, Karachi University*) paying his homage to Dr Ranganathan. *Seated* (L to R). K S Dubey (BHU), P N Kaula, K C Jain Gorewala (*Librarian, Kashi Vidyapeth*), Dr S Jha (*Librarian, Sanskrit University*), D Subramanyam (*President, U P Library Association*), L S Shukla (*Lecturer in Lib Sc, BHU*), Ramji Singh

CHAPTER B3

A Note on the Compatibility of two Information Systems, Colon Classification and Western Reserve University (Encoded Telegraphic Abstracts) and the Feasibility of Interchanging their Notations[1]

JESSICA S MELTON

1 WRU and Colon Classification

11 SIMILARITY

THE similarity between the aims and accomplishments of the Colon Classification of S R Ranganathan and the Encoded Telegraphic Abstracts of J W Perry and associates, which shall be referred to in this paper as the WRU (Western Reserve University) system, has been noted by many documentalists. Each system overcomes the rigidity of conventional hierarchical classification. Each system allows for the recording of any number and kinds of facets which may characterise a piece of literature, as well as for their interactions. Each extends "infinite hospitality" to new and yet undiscovered facets. Each system stresses the importance of first characterising on the "idea plane" rather than on the "verbal plane". It is obvious that the development of both systems was motivated by the same purposes, and it is scarcely surprising that the WRU system should have many features in common with Colon Classification, although it would be impossible to estimate the extent to which, consciously or otherwise, the WRU system has been influenced, even guided in its development by the earlier Colon Classification.

12 DIFFERENCES

Present day differences in degree of mechanisation of the USA and India are perhaps, the reason for most of the differences between Colon Classification and the WRU system. But whatever the reasons for these differences, they are more superficial in nature than may be apparent at first glance.

2 Fundamental Categories

The only difference that might, perhaps, appear to be something more than superficial, pertains to the Colon Classification's five fundamental categories time, space, energy, matter, and personality The user of Colon Classification must understand his subject matter in terms of these five fundamental categories In addition, in classifying what Dr Ranganathan terms "micro thought", the CC classifier also investigates his subject matter in terms of actand, energy isolate, and actor The classifier working with the WRU system proceeds in almost an identical way He also is given "fundamental categories", though they are not so named Since he is working almost entirely with micro classification, he too is looking for actand, action, or energy isolate, actor The CC classifier may find the characteristics to be classified group themselves into several rounds or ramifications These he records in a prescribed sequence The WRU classifier working with micro classification also encounters the need for recording characteristics in depth, round after round and level upon level The similarities enumerated above exist on the idea plane of classification

21 Terminology

The differences between the two systems are predominantly on the notation plane On the face of it, there are also considerable differences on the verbal plane, but these differences are readily resolved, albeit by different means for each, as will be shown later The end purpose, however, that of consistent notation is the same for each To attain this consistency the CC classifier refers to a schedule of approved terminology, while the WRU system's semantic-code eliminates the need of an authority list of acceptable terminology through the automatic encoding of natural language terms into a consistent notation Thus when a CC classifier changes the word *curing* to *therapeutics* or *therapy*, he is achieving consistency by consulting a schedule The WRU classifier may use any of these words, because the automatically accomplished encoding would render either one semantically as a notation whose meaning is "the act of helping or making better by medical treatment"

3 Notation

The differences on the notation plane are of little consequence intellectually Each notation was designed to be used in a somewhat different way to achieve the required identification of documents of pertinent interest Thus, the CC notation was designed for visual consultation The WRU notation was designed for *exploitation by machine* The attention to sequence, for example, which is vital to the efficient use of the CC, is of only incidental concern to the WRU system. However, so compatible to our natural sequence of perception is the sequence of recording aspects of reality prescribed by Dr Ranganathan, that the

WRU system basically adheres to the same sequence, though not for purposes of exploitation, but rather to satisfy the natural inclination of the classifier Rounds and levels are indicated in the WRU system by symbols whose function is to signal the machine that it has come to the beginning or end of a level or a round The five fundamental categories and the actand-action-actor relationship are signalled by other devices called role-indicators, which are the analogue of the CC punctuation symbols denoting Personality, Matter, Energy, Space, and Time

4 Steps in Classification

In a paper entitled "Natural, Classificatory, and Machine Languages" presented by Dr Ranganathan before An International Conference for Standards on a Common Language for Machine Searching and Translation sponsored by Western Reserve University and Rand Development Corporation in Cleveland, Ohio, United States of America, September 6-12, 1959, he includes a demonstration of the steps in classification from a raw title to its CC number The raw title reads "Effect of a dosage of 5 cc of C367 every two days for dog bite" The CC Class number is L71 424, K1 663C367, *b* 635 6*a*B2 j Dr Ranganathan explains the process of classification in seven steps For the purpose of clarifying the high degree of correlation between the WRU system and CC, let us follow a WRU classifier's progress from the raw title to completed notation A word of explanation should be injected here first, however The WRU system is rarely applied to titles only In both the operational and research projects in which the WRU system has been applied and developed, either whole documents or informative abstracts have been used in order to obtain classification in the depth desired by the sponsors of these projects [2] Of course, the WRU system can be applied to titles alone and in such as application the process of interpolation of implied information would be identical to that in Step 1 outlined in Dr Ranganathan's paper

41 Colon Classification

Step 0—Step 2 C, outlined by Ranganathan, which are reproduced immediately below are essentially the same for classifiers working both systems

Here is an illustration of the seven steps prescribed for classifying a document without phase relation

A Step 0 Raw Title
"Effect of a dosage of 5 cc of C367 every two days for dog-bite"

1 *Explanation*
Raw title is the title found in the document

B Step 1 Expressive title
"Effect" of injection "of a dosage of 5 cc" of "the vaccine" C367 "with a periodicity of" two days "for curing" "the disease" "of the central nervous system" "caused by virus from" dog-bite "in Medicine".

1 *Explanation*

1 The following kernel terms have been inserted along with their auxiliaries within quotes, to make explicit the basic class and the isolates omitted in the raw title but implied in it

Injection Disease
Vaccine Central nervous system
Periodicity Virus
Curing Medicine

2 'Medicine' really stands for the basic class dealing with the human body

C Step 2 Kernal Title

"Effect injection 5 cc Vaccine C367 periodicity of two days Curing Disease Central nervous system Virus dog-bite Medicine

1 *Explanation*

(*a*) Auxiliaries are omitted
(*b*) Only the kernel terms are retained
(*c*) 'Medicine' is the basic term
(*d*) The other terms are isolate terms
(*e*) Each of the terms denotes a facet of the subject of the document

Steps 2 D through Step 7 are a demonstration of the application of the CC postulates and schedules leading to the ultimate assignment of the Colon Number

42 WRU SYSTEM

The WRU classifier goes along a different path operationally, though on the idea plane he is viewing his subject in essentially the same way as is the CC classifier The WRU classifier has before him a skeletal organisation pattern into which he may fit the terms of this raw title The pattern calls for the indication of actand-action-actor, or agent, and related characteristics This organisational framework directs him to seek out the term or terms which fill the role of actand, in this case he chooses "central nervous system" To this term, he affixes a role indicator KEJ, which indicates that this term, in the frame of reference of the field which he is classifying, is an entity (the analogue of Ranganathan's Personality) whose role is that of actand Before each role indicator-term combination, he writes a symbol to indicate the beginning of a chain of characteristics as follows

&KEJ CENTRAL NERVOUS SYSTEM

Next he looks for those terms which denote actions and actors acting upon the actand There are, in order of their appearance in the title, three terms denoting action *injection*, *curing*, and *disease*. These actions have actors or agents *vaccine virus* and *dog*[3] He understands that two agents relate to one action while the third agent relates to two actions. Therefore, he groups the actions with their actors using symbolism to separate these units. Thus he records the terms and affixes to them either the role indicator KAM (action) or the role indicator KQJ (actor) as appropriate

-KAM	disease
,KQJ	virus
,KQJ	dog
-KAM	curing
,KQJ	C367
,KAM	injection[4]

The WRU abstractor is aware that there is another set of relationships involving *virus* and *dog* which he has already designated as agents of *disease* These relationships are that of parasite to host, the analogue of the CC Entity-Source Principle Two role indicators exist for the designation of this relationship for medical classification They are KOP (parasite) and KOH (host) These role indicators are added to the role indicators for agents and the group of relationships now reads

-KAM	disease
,KQJ KOP	virus
,KQJ KOH	dog

421 TELEGRAPHIC ABSTRACT

Next the WRU classifier fills in the rest of the data (amount and periodicity) given in the raw title His finished classification (called a "telegraphic abstract") will read as follows (a full explanation of all the symbols is given on the following pages where the two schemes are correlated)

&KEJ	central nervous system
-KAM	disease
,KQJ KOP	virus
,KQJ KOH	dog
,KAM	curing
,KQJ	C367
*NMT 005 cc	
,KAM	injection
,KIT	days
*NMT 002	
&M 0001	

5 Comparison of CC and WRU

The component parts of the two classifications are compared on the following pages The Colon Number and its meaning are given in the first two columns The WRU telegraphic abstract and its meaning are given in the last three columns The telegraphic abstract is shown in its two stages, the first stage as the classifier records it with punctuation symbols and role indicators affixed to natural language terms, and the second stage which shows the semantic codes for each word These codes are assigned by machine

51 TABLE OF COMPARISON

A comparison of classification schedules, ie the CC schedules and their generic-specific aspects with the WRU Semantic Code and its generic-specific aspects, will not be considered in this paper However, an explanation of the generic and specific meaning of the code for each term used in the WRU telegraphic abstract version is included

6 Correlations on Idea Plane

61 COMPLETE CORRELATIONS

1 lines 3-4

In both systems, the isolate *central nervous system* is placed in the category of personality and is indicated by CC, Actand-Action-Actor Postulate and WRU role indicator KEJ (actand) as the actand, or recipient of the action

2 lines 6-7

Disease is indicated in both systems as Energy by CC colon and WRU role-indicator KAM (action)

3 lines 9-15

Virus and *dog* are indicated in both systems as

(*a*) personality-actor by CC Actand-Action-Actor Postulate and by WRU role indicator KQJ (actor)

(*b*) the relationship of *virus* to *dog* is given by CC Entity-Source Principle by WRU role indicators KOP (parasite) and KOH (host)

4 lines 20-21

C367 is indicated as a vaccine, specifically C367, and as an actor, by Dr Ranganathan's Actand-Action-Actor Postulate and by the WRU role-indicator KQJ (actor) However C367 in another aspect must be considered to have no correlation (see below, C 1)

5 lines 22-23

In both systems the fact that the quantity of vaccine is 5 cc is indicated in close conjunction with the notation for vaccine

6 lines 25-26

	CC Colon Number	*Meaning of CC notation*	*WRU Telegraphic Abstract (Symbols written by Classifier)*	*WRU System 2nd step English words Encoded*	*Meaning of WRU Notation*
1	L	Basic Class medicine			
2					Beginning of a chain of characteristics
3		Personality (1st round)	KEJ		Personality—actand
4	71	central nervous system	central nervous system	BAPN. 010	Nervous system in general, specifically *central nervous system*
5		–	–		beginning and end of a sub chain of characteristics.
7	4	disease	disease	DASG. 001	*disease* in general (all specific diseases contain DASG in their codes)
8					beginning of an isolate
9		personality (2nd round)	KOJ		personality—actor
10			KOP		personality—parasite

	CC Colon Number	*Meaning of CC notation*	*WRU Telegraphic Abstract (Symbols written by Classifier)*	*WRU System 2nd step English words Encoded*	*Meaning of WRU Notation*
11	24	virus	virus	MACR. 037.	a member of the Class micro-organism, specifically *virus*
12					beginning of an isolate
13		W personality (2nd round) (2nd level)	KOJ		personality—actor
14			KOH		personality—host
15	K1	dog	dog	NAML. 009	animal in general specifically *dog*
16		.			beginning and end of a sub-chain of characteristics
17		energy (2nd round)	KAM		energy—action
18	6	serum therapy	curing	HULP. TQRT. 001	HULP. : the act of helping TQRT. : by medical treatment .001. : specifically *curing*
19					beginning of an isolate

20		personality (3rd round)	KQJ		personality—actor
21	63	vaccine, specific vaccine,	C367	BWPN 010X DARG 023X DWSG MWCR. 037X NUBT 337	BWPN acts on nervous system 010X specifically *central nervous system* DARG is a drug 023X specifically a vaccine DWSG acts on disease MWCR acts on microorganisms 037X specifically *virus* NUBT used for inhabiting 367 specifically, C367
22		matter (3rd round)	*NMT		amount is stated
23	*b*635	amount of vaccine, 5 (cc)	005 cc		5 cc
24					beginning of an isolate
25		energy (3rd round)	KAM		energy—action
26	6	injection	injection	NUTR PASS 026	NUTR used for entering PASS a process 026 specifically *injection*
27					beginning of an isolate
28	*a*	periodicity	KII		time (period of)

	CC Colon Number	*Meaning of CC notation*	*WRU Telegraphic Abstract (Symbols written by Classifier)*	*WRU System 2nd step English words Encoded*	*Meaning of WRU Notation*
29	B	days	days	LAMN. TYMM. 016	LAMN a unit TYMN of time 016 specifically *day*
30	2	2 (days)	*NMT 002		amount is stated specifically 2 (days)
31	J	energy (4th round)			
32	J	fact			
33			&		end of chain of characteristics
34			MOO 1		Ist document in the medical file

In both systems the isolate *injection* is indicated as Energy, by the CC colon and by the WRU role-indicator KAM. (action).

7 lines 28-30

In both systems the fact that the vaccine is injected at two-day intervals is indicated in close conjunction with *injection.*

62 Partial Correlations

1 Line 1 and line 34

That this document pertains to the field of medicine is indicated in the Colon Number by assigning 'L' as the basic class. In the WRU system it would be assigned to the special file of micro classification for which it was classified, by the assigning of an arbitrary letter (here M) in conjunction with its serial number Thus M would designate that this telegraphic abstract is part of the M file, classified for some branch of the field of medicine.

2 Lines 18-19

The CC schedule would dictate that *serum therapy* be chosen to express the act of curing by vaccine The WRU system does not impose this restriction, rather, it allows the use of a word such as *curing* or *therapy* to indicate the act, in conjunction with C 367 to indicate the agent However, in both systems this therapy is indicated as Energy by the CC colon and the WRU role indicator KAM (action)

3 Lines 2, 5, 8, 12, 16, 19, 24, 27, and 33

The correlation here is of an essentially simple kind These symbols used by the WRU system, but not by the CC, simply group units of characteristics—isolates, facets, and chains of characteristics. Their use is neccessitated by the inability of a machine to recognize when scanning tape the beginning or end of a unit unless they are somehow tagged. For the CC Number, when it is printed, there is no problem in recognizing units Notation, position, and spacing give clear indication as to their grouping One might say, then that on the idea plane there is a clear correlation since in neither system is there any ambiguity or overlapping of segments of classified information However on the notation Plane, since the segmentation does not precisely coincide, these divisional symbols are listed as partial correlation.

63 No Correlation

1 Lines 21 and 26

The CC system has by the postulate, Actand-Action-Actor, designated C 367 vaccine as the actand of the action *injection.* This relationship, though logically valid, is not recorded in the WRU telegraphic abstract It could however, easily be made explicit by affixing the role indicator KEJ (actand) to vaccine in addition to the role indicator KQJ (actor), (KQJ. KEJ. *C*367). It is not customary in the present operation to record an injected substance in both of these roles If at any time searching experience warrants the use of this device, it could be used

2 lines 31-32

The CC classification has resolved the classification of the word *effect* which appeared in the raw title by assigning it to the Energy category and indicating it as "fact", "which is got by experiment and observation" This resolution is presumably not entirely satisfactory to Dr Ranganathan, for he says, "There is now no objective principle to fix the position of a common isolate, such as 'Effect' It is left to our vague semantic sense " The WRU system would omit any indication of this word in characterising this title In classifying medical documents the WRU system does indicate authors' conclusions or theories, as such, but unless indicated as authors' conclusions or theories, the characteristics are assumed to be obtained through experiment or observation

7 Result of Comparative Analysis

71 Full Agreement 75%

If we disregard the 9 items of the WRU grouping symbols, we have 25 ideas to compare in these two classifications We have discovered that 19 of these are in perfect agreement on the idea plane Four agree partially Two of these, items 1 and 34, indicate that the basic class to which this document pertains is Medicine

72 Partial Difference

The difference is relatively slight on the idea level It is a difference of degree rather than concept The difference in degree of prominence of the designation of basic class is occasioned by the difference in physical storage of the two systems The CC is oriented towards large catalogues for varied collections The WRU system is oriented towards micro classification of separate fields, whose classifications are kept physically separated from radically different fields, but are purposely merged with closely related fields for machine searches

Partial Correlation The other two partially correlating aspects, items 18 and 19, do actually correlate rather closely on the idea plane when one considers the grouping of concepts. The CC notation, 663 designates "Energy-*serum therapy*-Personality-*vaccine*" as a unit. The WRU system designates "Action-*therapy*-Agent-C367" as a unit The difference then is the omission in the WRU system of the term *serum* as designating the more generic aspect of therapy by vaccine. However, the semantic code for *vaccine* contains the generic aspect *drug* which is implicit in the term *serum therapy*.

73 ACTUAL DIFFERENCE 16%

We find four items in the two classification system which do not correlate at all. All four of these are omissions on the part of the WRU classifier of the actand-actor relationship of *vaccine* and *injection* has already been discussed in C.1 above, and could very simply have been incorporated in the telegraphic abstract The omission of the information that the characteristics of this title constitute a fact is omitted on principle from the WRU telegraphic abstract, as explained in C 2 , above

8 **Transfer of Notation**

With the high degree of compatibility of the CC and the WRU systems on the idea plane, a transfer of one system of notation to the other is substantially —and rather surprisingly—a matter of mechanics. Such transfer could be accomplished automatically even with relatively simple machines

Process of Transfer Briefly, the process of transfer from CC to WRU encoded telegraphic abstracts would consist of the following steps

1 Preparation of a dictionary of CC schedules and symbols to punctuation, role indicators, and semantic code

2 Key punching Colon numbers with significant symbolism detectable by position whether by fixed field or in relation to other facets

3 Automatically encoding Colon numbers by machine dictionary look-up

To go from semi-encoded WRU (step 1 shown on the correlation chart) or fully encoded WRU (step 2 shown on the correlation chart) telegraphic abstracts to Colon numbers the above process would be reversed With relatively minor attention to the order of recording characteristics, the CC postulates could be adhered to in the WRU system

91 **Fundamental Relationship**

Since these systems are compatible on the idea plane, it also follows that the facets of either can be exploited by a common search strategy involving the Boolean principles of logical product, logical sum, and logical difference currently used by the Center for Documentation and Communication Research These logical principles were the basis for designing the WRU Searching Selector and its high-speed counterpart the GE-250 Information Selector Thus these machines, as well as the CC and the WRU systems, stand in a fundamental relationship to the mathematical formulation of classes as expressed by Boolean algebra

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1 The work reported in this paper was accomplished under contract number AF 49 (638)-357 to Mathematical Sciences, Air Force Office of Scientific Research, Air Research and Development Command, United States Air Force, Washington 25, D C

2 There have also been projects to demonstrate the application of the WRU system to previously generated subject headings and classifications such as UDCSee Jessica Melton, "Encoding of Information Previously Classified, "*Tools for Machine Literature Searching*, J W Perry and Allen Kent, Eds, New York Interscience Publishers, Inc 1958 p 361-374

3 In step 5 of Dr Ranganathan's analysis which gives the title in Standard Facet Terms, he says, " 'Dog-bite' has been replaced by 'Dog'. " This substitution would likewise be made by the WRU analyst

4 The WRU classifier would probably record "injection" immediately after "curing", but the order of terms within this unit is not essential, and this order coincides with the CC order, so it is presented for the sake of correlation

CHAPTER B4

Classification

RALPH R SHAW

0 Introduction

WHEN this writer attempts to think about classification, he finds himself thinking about the word as if it were written in a circle, as on a clock face, with no indication of where in the word to start reading. However, there are a few considerations that might well be brought up at this time.

1 Colon Classification

The colon Classification must be recognized as a milestone in the development of the intellectual processes involved in the organization of the information that appears in recorded form.

Whether the CC is or will be good for any particular current use in its current form or in its form of ten years ago, or whether it will be of any particular use in its native form ten or twenty years from now, is relatively unimportant.

Whether CC is better or worse than DC, UDC, LC or "Reader-Interest Classification", is relatively unimportant. Whether its notation is more or less compact than others; whether it is more or less suitable for machine handling of information than other notations; whether it is easier or harder to apply uniformly in varying types and sizes of libraries than others; whether its schedules are longer or shorter than those of other schemes;—all these are relatively unimportant.

11 CONTRIBUTION OF CC

What is important, to this writer at least, is that Dr Ranganathan's work with his CC has opened minds—which is the hallmark of a truly great teacher.

2 Synthetic Classification

Nowhere in the world can anyone seriously discuss or think about problems of organizing recorded knowledge, whether on the most elementary or the most sophisticated levels, without taking into account the development of the theory of synthetic classification that is inherent in the CC and in the work of all those who have worked on the development of the CC.

3 Two Types of Schemes

Fundamentally, there are only two types of classification schemes—the hierarchical, of which DC, LC and BC are classic examples, and the synthetic, of which Colon is the most nearly pure prototype While none of the schemes in existence is entirely synthetic or entirely hierarchical, and both of these types break away from attempting to organize knowledge from time to time—as when they, for pragmatic purposes, insert form divisions such as "literature" or "biography" or "time divisions" or similar mechanically useful forms of arranging recorded knowledge that are auxiliary to handling the intellectual content.

31 RANGANATHAN'S CONTRIBUTION

While even Dewey had form numbers which could be used systematically for synthesis, and UDC, with its semicolon relationship symbol, permitted a considerable amount of synthesis, the Meccano technique of synthesis and the very large scale elimination of hierarchical relationship is one of Dr Ranganathan's contributions which led to the burgeoning of the synthetic approach Whether the particular scheme being promoted is Dr Taube's Uniterm indexing, or the British Classification Research Group's approach, or the US Bureau of Standards' Peekaboo system, oı a scheme designed to permit a million dollar computer to answer 99 questions at a time, their roots in the Meccano philosophy are clearly discernible

32 HABIT OF DECIMAL NOTATION

On the other hand, our habit of thinking in terms of hierarchical array and decimal notation is nowhere more clearly shown than in the publications edited by Dr Ranganathan himself, in which the paragraph referencing is strictly decimal notation (See, for example, *Public library provision and documentation problems*, 1951, in which each paragraph is numbered in a decimal notation, using 0 to 9 and subdividing in many cases to three decimal places)

4 Depth Classification

One of the critical questions that will, sooner or later, have to be faced—and if it will come from anyone the solution is likely to come from Dr Ranganathan and his followers—is the extent to which more intensive classification is really worth while Is it not possible that we are spending a great deal of effort attempting ultra-fine distinctions in classification and in the ability of classification schemes to handle them, when we apply and must continue to apply the schemes to relatively gross packages of concepts as they appear in particular books, articles, pages or paragraphs?

41 LIMITATION

Even if we conceive of the classification scheme as a means for bringing out every idea on every page of every recorded bit of information, nevertheless in its application we are bound to the particular information provided *in a particular context in a particular article.* This means, in plain English, that in applying bibliographical classification schemes we are bound to physical objects or limited physical groupings of ideas expressed by one author in one opus (whether it be a book or a broadside). We are not dealing with logical concepts freely manipulable in space, time and relationships so as to create new concepts that are independent of the particular item being indexed.

One of the things this writer learned in college physics is that one gains nothing in accuracy or quality of information by carrying out the mathematical manipulations and calculations to move decimal places than are given in the original observation. If, as is the case in the great bulk of writing, one new idea per article is above par, and two or three new ideas per article is a rarity, and if, as noted above, all useful relationships, classification-wise are within the one piece being indexed, then one is inclined to wonder what we add by increasing levels of sophistication and/or complication in bibliographical classification schemes.

This, it would seem, is well worth deep thought by the best minds in the field.

5 Approach to Classification

The other major ways of approaching classification are the pragmatic approaches made by Mooers and by Brisch (and to a considerable extent in the development of LC) versus the universal approach exemplified bv DC, UDC, CC, etc

51 PRAGMATIC APPROACH

The pragmatic approach makes the building of a classification scheme a relatively simple though skilled and painstaking job The normal operation by Brisch or Mooers is to examine the particular universe that is of concern currently to the people who want the material organized, whether that universe be a research laboratory or a parts depot. Then, without being unduly concerned about what people will look for a generation from now, or what products will be made a generation from now, or what research might be going on a generation from now, they simply find out what the current interests and needs and on-going research projects are, and develop a list of headings and/or a coding or classification scheme to handle the existent universe. This is a discreet job that can be done and with care can be done so as to handle the limited existing universe very well. If the universe changes substantially, a new scheme is then developed. Somewhat the same approach was used in developing the Library of Congress classification scheme which was based on the Library of Congress collections as the universe and has been expanded as the universe grew

6 Universal Classification Scheme

61 COMPLICATIONS

The developer of the universal classification scheme has a somewhat more complicated job to do. He must consider hospitality, expandability, and many other factors

Another complication that comes into the universal scheme is that it is here that we enter into debates on logic and metaphysics (whether or not they have anything to do with the indexing of physical objects) In the case of the pragmatic scheme, philosophical and metaphysical considerations are at a minimum

As a rule, universal classification schemes have been broader in the concepts they present than have specialized classification schemes, which tend to go into much greater detail within the areas of specialization they cover

62 HIERARCHICAL SCHEME

Since the context in which a concept is wanted will frequently change its place in the hierarchy, all fixed hierarchical schemes present certain problems when they attempt to serve all masters An obvious example of this occurs when we try to get one array of organization to serve manufacturers of autogiros as well as foresters It is natural for the forester to think of forest fire fighting as a subdivision of forestry and of autogiros as a subdivision of forest fire fighting, since he uses it for spotting and combating forest fires It is just as natural for the manufacturer of autogiros to think of the autogiro as the apex of his pyramid of knowledge, with forest fire fighting as a subdivision under the subdivison *uses* of autogiros

7 Advantages of A Synthetic Scheme

It would appear that the primary contribution that the synthetic scheme can offer as against the hierarchical scheme is simply the fact that it reduces the length of the tables There is no reason, except that of bulk and cost, why hierarchical tables could not be arranged under each of the points of view that is necessary, with the tables printed to put autogiros at the top of the hierarchical pyramid for autogiro manufacturers and at the bottom of the hierarchical pyramid for foresters The use of the meccano technique eliminates printing and press work and cuts down the bulk of comparable tables by a very large factor On the other hand, as is true in almost everything in this world, sadly enough we never get anything for nothing, so we pay for this reduction in the size of the tables by having to create the combination of concepts and their relationship each time we want to use them instead of having them printed in a book after having been created once. This raises a nice question of balance of the machine of classification and its application. At what point does it become more economical to create the tables anew each time they are used and at what point does it become more economical to print up the tables with each of the concepts in all of the necessary or desirable contexts ? If we know this, taking into consideration all of the costs, including time costs, for both methods of presentation, we might possibly proceed a long step beyond the present state of confused claims in the field of classification schemes.

71 LIMITATION

Unfortunately, this writer doesn't know the answer to this question at this time. He does know that many of the combinations and permutations that are alleged to be necessary by arithmetic manipulations clearly prove to be unnecessary. There is no evidence that he has been able to find, however, as to the number of different contexts in which concepts (whether they consist of one word or twelve) can usefully be manipulated. Even in the most synthetic of all of our schemes, there is a certain point beyond which we continue fixed hierarchical tables, even if it is only because of the hierarchical arrangement provided in the alphabetical arrangement of the main classes of CC

8 Challenge to the Organization of Information

It appears reasonably clear at this moment that there is no evidence that any intellectual values that can be achieved by any one of the systems of arranging or classifying or notation cannot be achieved by other systems If there are such intellectual gains that can be demonstrated to be true on some grounds other than mere assertion, then they should certainly carry great weight in reaching our conclusions If there are not such gains then all that we really need to do in order to resolve many of the current problems in classification is careful analysis of the total statics and dynamics of the storage and use of the classification tables themselves in hierarchical and in synthetic form and with various notation schemes.

It must be apparent from these brief remarks that this writer does not think that we have exhausted the significant challenges in the field of organization of information.

81 ANSWER FROM RANGANATHAN

There has been a tremendous increase in interest in this field which has sparked a number of brilliant minds into action. These achievements, which result largely from the work of Dr Ranganathan and his colleagues, will eventually produce the answers to these problems and the world will be richer

CHAPTER B5

A Seldom used Device

THEODORE A MUELLER

1 **Library of Congress Classification**

IN the Library of Congress system of classification, Class L is assigned to education and class LT to elementary and secondary textbooks covering more than one subject. At the end of Class LT, a note is added that if any library desires to assemble all textbooks on specific subjects this can be accomplished by adding the symbol LT to the class number.

2 **Classification of Textbooks**

Textbooks on specific subjects are naturally classified with the subject. However, in the one or the other university or reference library their presence on the shelves may be unwanted by faculty member or researcher. This objection can be met by classifying them as usual, adding the symbol LT to the class number, shelving them after the regular Class LT, and thereby assembling all textbooks in one place. Then they are out of the way but can still be of service for the study of textbooks per se.

21 USE OF THE DEVICE

The Library of Congress never used this device. Inquiry at various American university libraries revealed that none of them made use of it except the University of Chicago Library. There this suggestion was implemented in a slightly different manner. If a textbook for the study of Islam was classified in BP45.M8, the letters LT were prefixed resulting in the class number LTBP-45.M8. The Cutter number was determined from the position in class BP45. Shelf list cards were filed at BP45.M8 and a duplicate at LTBP45.M8. With the book labelled LTBP45.M8 all textbooks in the library were brought together.

22 SPECIAL LOCATION

This device may be thought of as a special location. However, the usual method for indicating a special location is to add the name of the location enclosed in parentheses to the class number: BP45.M8 (Textbook Collection) or BL1130 A5 (Rare Book Collection) In some libraries, the name of the special location is prefixed to the class number, as for instance "Wason" in the Cornell University Library

3 Periodicals

The University of Chicago Library has discontinued the use of the device described above because textbooks take us more space than is currently available. It was, however, a method that expressed not only location, but in a manner also relation The class letters for textbooks were used to express relation with the class number for textbooks on Islam. Nowhere else is a similar suggestion made in the Library of Congress classification system Textbooks are a form of publication so that such a device is entirely possible Periodicals (Class AP) are also a form of publication so that similar treatment, as for instance APBL1100 R5, is possible in order to assemble after the general periodicals (AP) all periodicals on special subjects The class number BL1100 is the number for a periodical on Brahmanism Unlike the case of textbooks, however, a periodical on Brahmanism will certainly want to be investigated with all other works on Brahmanism. The desire to keep all periodicals together can only be justified on the plea that periodicals present a special space problem

4 Relationship in the Congress Classification

The Library of Congress classification system then does not express relationship by way of juxtaposition of class numbers, but it very specifically provides numbers in each class to express the relationship of that class to other classes and subjects At the beginning of Class B (Philosophy), numbers are provided for the relationship of philosophy to other subjects and in Class BF (Psychology) for the relationship of psychology to other subjects

5 Classification of Education

The classification for education (Class L) was one of the earliest to be developed by the Library of Congress The suggestion for the treatment of textbooks has apparently found only one follower That happened because the man under whose general direction and supervision this class was developed at the Library of Congress subsequently became the Associate Director of Libraries at the University of Chicago, in charge of developing that library to modern high standards. That man was James C M Hanson, from whom this writer learned the fine art of cataloguing and classifying

PART C

COLON CLASSIFICATION

numbers as the case may be Thus it initiated the analytico-synthetic kind of classification, though in a very limited way

03 CC

The scheme to adopt the analytico-synthetic character completely was the CC In this respect, it struck an entirely new ground This scheme of classification analysed each subject, provided unit-schedules consisting only of fundamental constituent terms and prescribed several connecting symbols to synthesise the numbers representing these constituent terms It also gave a new philosophy and a new theoretical foundation as the basis for designing a scheme of classification The concept of Five Fundamental Categories, the postulates formulated in association with them, the Five Principles for Facet Sequence, the several principles for the sequence of the isolates in an array and the devices set forth for sharpening a focus, have given this scheme a scientific and a completely analytico-synthetic character A large volume of literature has appeared on this scheme, some criticising its notational intricacies, some appreciating its techniques, and still others admiring its working and the helpfulness of the final result in arrangement Bibliographies have also appeared on this subject[1] Some new classification systems have adopted its pattern in their design

It would, therefore, be interesting to trace the genesis, and the development of this outstanding scheme of classification, given to us by Dr Ranganathan

1 Ranganathan in England

When Dr Ranganathan was appointed the Librarian of the Madras University Library in 1924, he felt puzzled He did not know how to utilise his time He thought of going back to his first calling *viz* teaching But he was advised by the Principal of his college to defer this idea until he could go to London to get himself trained He reached London on 24 September 1924 and joined the London School of Librarianship The course included several odd subjects such as epigraphy, palecography, archives, Sanskrit, modern languages and English literature He felt repelled by this hotch-potch Fortunately W C Berwick Sayers was one of his teachers A few lectures on classification by Sayers, I am told, made him feel about the unsound foundation of the then current of classification systems He spent three months—October to December 1924—observing the effect of these schemes of classification on the service given by several libraries

11 Rigidity of Classification

Ranganathan was greatly attracted by the Pittsburgh Classified Catalogue He found the value of the classified pattern. He also observed the struggle in libraries in the application of the DC He found that the real difficulty in DC was the placing of new subjects. Nor was the division of sciences helpful and filiatory Books on educational problems could not be helpfully classified Great difficulties were experienced in the classification of books in philosophy, psychology, religion, geography, and history So Ranganathan's mind went into the foundation of classification.

12 COLON AT THE IDEA PLANE

Ranganathan was convinced that rigidity was creating difficulties in the then existing classification systems The idea came to his mind that a tree should sprout and allow its branches to grow at several points independently of one another He, therefore, spent about two months in meditating over this problem He finally thought of creating facets separated by the symbol "Colon" In February-March 1925, he prepared sample schedules for different facets and experimented on synthesised numbers He spent about three hours with Sayers discussing the results of his experiment. Sayers appreciated the necessity to proceed along such lines He also gave a fruitful warning to Ranganathan He said that classification might look easy at the surface, but would become difficult at deeper levels. Those difficulties are still persisting, and Ranganathan has spent his entire life in removing them one after another

13 COLON AT AN EMBRYONIC STAGE

Even in 1925 and even while still abroad, Ranganathan sketched out new classification He got from Madras an interleaved copy of the printed catalogue of the Madras University Library alphabetically listing about 30,000 titles While on board the ship in his return journey to Madras, he had a trial of his new scheme by classifying the books in the library of the ship—The Dumana He also provided tentative class numbers to the 30,000 titles in the catalogue of the Madras University Library

2 Colon Introduced

In July 1925, Ranganathan reached Madras and started reorganising the books in the Madras University Library according to what he had done in absentia He also personally did reference service to students and teachers or floor duty work for several months. This gave him an insight into the readers' reaction to the resulting classified sequence

21 DETAILED SCHEDULES

In 1926, two industrious and honest persons—K M Sivaraman and C Sundaram were recruited. This made possible better reference service. There were thus three persons available for floor duty instead of one I understand that about that time the classified arrangement on the shelf with the tentative schedules of the Colon Classification and open access were greatly appreciated by several professors This led many of the professors to give help in the designing of the detailed schedules for several subjects

22 Help from Specialists

Ranganathan consulted several specialists while finalising the design of the schedules He consulted Prof Edward B Ross in the general layout, mathematics and general sciences; Prof M S Sabesan in Botany, Dr B B Dey in chemistry, Mahamahopadhya S Kuppuswami Sastri in Indology, and Sir Sivaswamy Ayyar and Sir S Vardachariar in Law With their help, he completed the schedules in 1927

23 Current Books

In 1928, Dr S Subbarayan, the Chief Minister of Madras, gave a recurring grant of about Rs 70,000 a year to the library This brought in quite a large number of current books The development of CC was then kept parallel to the development of current thought as embodied in books

24 Reaction of Readers

From 1928-31, the reaction of readers was closely observed in the stackroom and whenever there was any sign of unhelpfulness, the points were noted In 1931, Ranganathan incorporated in CC the new findings suggested by these notes The schedules were redone, wherever found necessary

241 MAIN CHANGES

The following changes were introduced·

In chemistry the conflict of facets was resolved The sequence of Substance [S] and Problem [P] facets was changed

Change of species of symbols was introduced No connecting symbol was found, necessary in certain cases This was visible in History. No connecting symbol had been originally provided between Problem [P] and Chronological [C] facets Thus the entire History collection had to be re-classified The staff of the library being pioneers, willingly did it without any disturbance to readers

There was a little conflict in Law as well But the sequence of facets in the original schedule was maintained

25 PRESS COPY

In 1932, the scheme was prepared in a manuscript form and made ready for the press All the members of the staff, (about 15 persons) helped Ranganathan in writing slips and arranging them This was done as a work of love in Ranganathan's house on Fridays from morning to evening For, in those years, the Madras University Library was kept closed in continuation of the tradition of the Madras Museum where it was originally housed

3 Birth of Colon Classification

In 1933, the Madras Library Association released the *Colon classification* as the third volume of its Publication Series. Soon after its release, the major part of Ranganathan's mind went off to cataloguing, administration and so on But the addition of new books to the library and along with it the influence of the younger generation of students with keenness to analyse and to learn new ideas, helped in the growth of CC Ranganathan's mind went into two directions. He was occupied in adding new isolates and introducing changes in the old isolates on the basis of the new thought getting embodied in books The isolates for books on 'Mitogenetic radiation' was changed thrice, those on 'Molecular rays' also in a similar way

31 THEORY EXPOUNDED

In 1936, Ranganathan felt that, as the facet-approach both in the idea and in the notation planes gave a more resilient foundation in CC than in DC, he should work out a detailed and comprehensive theory of library classification His feeling was that W C Berwick Sayer's books[2] were descriptive rather than dynamic and provocative, and that they did not therefore provide much help in new situations Ranganathan, therefore, grappled with new ideas Fortunately in that year, Ramanathan, who was an adept in the discipline of Nyaya Philosophy and logic, became a student in the library course He took interest in the development of the theory The result was the *Prolegomena*[3]. This book was released in 1937, as the sixth volume of the Publication Series of the Madras Library Association. This book revolutionised the thought on library classification

32 CC RE-EXAMINED

In the light of the theory expounded in the *Prolegomena*, CC was re-examined. New isolates were added with the help of various devices. Mnemonic isolates were created This Ranganathan was able to achieve with the assistance of the staff who worked loyally and with a pioneering zeal. CC had already been received throughout the world as a major scheme of classification. Favourable reviews and comments appeared in professional periodicals. This increased the responsibility of the author of the CC While adding to its stature, the *Prolegomena* too made exacting demands on CC Under the action of these two forces, the second edition of CC took shape It was brought out in 1939 In response to request from several classifiers in India and other countries, this edition gave about 3,000 examples.

33 OBSTACLES

1939-44 was the War Period There was little of academic life and activity On the other hand, there were other difficulties The staff of the library had grown old by that time Unfortunately undesirable elements were put into in the staff They poisoned the minds of the other members This disturbed the loyalty of the staff and their devotion to the subject So there could be no progress Ranganathan was left to work almost alone

34 COMPARATIVE ANALYSIS OF CC

In 1944, CC was discussed by Indian librarians The occasion was the Sixth All India Library Conference held at Jaipur The Conference was presented with a symposium on library classification It contained about a dozen papers These were all turned on a comparative study of the CC and DC The stimulus for this was the appearance of ed 14 of DC in 1942 As a result of this comparative study, the merits of the CC were high-lighted by the national professional organisation.

35 THEORY SIMPLIFIED

Towards the end of 1944, the University of Bombay invited Ranganathan to deliver a course of lectures to the students of the newly started Diploma Course in Library Science The class consisted of some librarians of the city as well as non-librarians That gave Ranganathan an insight into which an unsophisticated fresh mind could conceive those problems It gave him an opportunity to slow down the rate of thinking and observe the minute details which created trouble in uninitiated minds Dr P M Joshi, the then librarian of the University of Bombay, was the person who created this opportunity The experience gained in Bombay produced the *Elements*[4] This small book analyses library classification in a lucid way without the technicalities and the depth of the *Prolegomena*

4 Further Development

41 CC AFTER 1945

Ranganathan retired from the Madras University in 1945 By that time CC had completed twenty years of its existence. It was being taught not only in Madras but also in other schools of library science The difficulty in the other schools, however, was the dearth of competent teachers to teach the scheme in detail and on a comparative basis with other schemes of classification A major portion of the professional literature in India related to the study and analysis of the CC

42 A Great Experience

Ranganathan went to the Banaras Hindu University in August 1945 He remained there upto June 1947 There he was faced with a different situation There was no competent staff and there was none with a pioneering spirit The collection was in a hotch-potch condition It exceeded a hundred thousand volumes These were classified by Ranganathan practically single-handed He classified these volumes in eighteen months This was a great experience A great strain had to be borne by the classification schedules as the collection was made of all kinds of stuff donated by casual collection of books. Ranganathan went on evolving a new methodology His mind got charged with new problems

43 A New Opportunity

A change came in 1947 Sir Maurice Gwyer, the then Vice-Chancellor of the University of Delhi, invited Ranganathan to his university He was asked to organise a Department of Library Science He had to do only teaching work For the first time, he was totally free from the administrative work. Along with the Diploma Course, the Master's Degree Course and the Doctorate Course in Library Science were opened Indian librarians were invited to other countries and better opportunities of service were created within India also This led to a higher class of students coming to Delhi Some of these were greatly enthused in the study of classification Some began to contribute to the study of classification The CC thus entered an era of collective pursuit This has led to many new results not only in CC but also in the general theory of classification

44 CC In the International Forum

In September 1947, the FID (=International Federation for Documentation) invited Ranganathan to present his views on classification and documentation He wrote the paper sitting at the farthest end of the stackroom of the Delhi University Library (old building) and sent it to Donker Duyvis, the then Secretary General of FID, in three copies, one for FID, one for the librarians of England, and the other for the librarians of America Donker Duyvis wrote back to Ranganathan stating that it was too good a contribution to be circulated privately. He also asked whether he had any objection to the paper being printed and published. He also stated that it was for the first time that a paper of such importance was brought out by the FID He further invited Ranganathan to attend the FID Conference at the Hague in May 1948. The paper was printed by the FID as a separate issue of the *Review of documentation*[5].

5 Three Invitations

Ranganathan declined the invitation of the FID But there were three other forces compelling him to accept it. On receiving the negative reply from Ranganathan, Donker Duyvis wrote to Edward Carter, the then Head of the Libraries Division of Unesco, to invite Ranganathan on behalf of the Unesco Sir John Sargant, who was just retiring as the Educational Commissioner of the Government of India, joined the British Council as one of its officers The British Council had also decided to establish an office in India after our independence and had thought of inviting some Indians to England for cultural contact. Sir John Sargant and Sir Maurice Gwyer "conspired" to export Ranganathan This "Conspiracy" was disclosed by Sir Maurice just three days before the official invitation came from Sir John Adams, the Chairman of the British Council Ranganathan was the first Indian to be invited and the first to visit UK on their invitation Edward Carter also had written to the British Council simultaneously

51 CC Discussed at FID

Ranganathan decided to go When he attended the FID meeting at the Hague, he found that the members were eager to know about the facet approach in classification They provided three hours for this discussion although Ranganathan's article[6] had been printed and studied by the members Most of the members consisted of engineers and other non-librarians. There were a few librarians too Ranganathan's discussion with several specialists helped him to channelise new ideas and gave him an opportunity to think deeper

52 Another Historical Accident

Another historical accident threw seeds An invitation came to Ranganathan from the United Nations He had thus to go to the United States of America At a dinner given by the Carnegie Corporation of New York and the Rockefeller Foundation, Ranganathan was asked to reply to toast on behalf of the guests Through God's Grace, Ranganathan was able, I am told, to produce a tremendous impression on these institutions One result of it has been that the UN took an Indian into its library staff. Ranganathan selected P K Garde for assignment. He still continues to be the librarian of Ecafe When in

England, Ranganathan attended the Commonwealth Universities Conference at Oxford, Julian Huxley, the then Director of Unesco and representatives of the Carnegie and the Rockefeller Foundations also attended the Commonwealth Universities Conference Huxley seems to have been greatly impressed by Ranganathan's speeches at the Conference. The Head of the All Souls College and Dr S Radhakrishnan who was then in residence at the All Souls, arranged for the representatives of the Carnegie and the Rockefeller Foundations and Julian Huxley to meet Ranganathan at the All Souls. This was a productive meeting It started a new epoch in the development of library classification

53 INVITATION FROM ROCKEFELLER FOUNDATION

In 1949, a representative of the Rockefeller Foundation came to India, met Ranganathan, and invited him to make a long visit to U S A. Ranganathan refused to take remuneration Ranganathan was asked to take one of his students with him S Parthasarathy was chosen for this purpose They both left for U S A in 1950 This long visit was used to visit several factories in order to get ideas on design of depth classification for use in documentation work and service On arrival in New York, Ranganathan was told that the Foundation believed that the CC with its facet analysis running its roots to the Five Fundamental Categories of the seminal level, could be developed into a language for international communication free from errors Weiner's analogy leading to this belief is described by Puranik[7]. However Ranganathan showed that the international communication was really vitiated by emotions and that CC language could not remedy it He examined this question in his *Classification and communication*[8]

54 CLEVELAND CONFERENCE

The annual Conference of the American Library Association was held in Cleveland in 1950 It was the year of the Golden Jubliee of the Catalogue and Classification Section of the ALA Ranganathan was invited to deliver the Jubilee Address The President of the ALA was Milton Lord. He requested Ranganathan to give them an idea about his work The audience was expected to be 7,000 to 8,000 and the time allotted for the talk was 30 minutes Ranganathan drafted a syllabus for his talk and sent it to the Secretary of the ALA, for making copies and distributing them to the audience before the address would begin Ranganathan sent a copy to Milton Lord also. He got upset by the formidable nature of the syllabus He wrote that whereas he wanted that the facet idea should be sold to the audience, the librarians might be scared away by the severity of the syllabus Ranganathan wrote back that it would be properly sugar-coated at the time of the address. On the day of the Golden Jubilee address, Ranganathan went to the Conference

Building ten minutes before time. But Brown of Iowa was waiting at the gate to meet him As a result, he was delayed and he could enter the hall only just to address. This did not give time for Milton Lord to ask for a change in the substance and the method of the address He was therefore thrown into a mood of despair However, this mood cleared away as soon as Ranganathan started his address with stories from the *Vedas* and the *Ramayana* and about *Euclid* In fact, he threw the audience into a peal of laughter when he dramatised facet analysis with the analogy of a barrister extracting confession after confession from the accused in a Court of Law. All the while, the selections in the syllabus served, as the rails along which the exposition moved The sugar-coating proved perfect.

55 CLASSIFICATION RESEARCH GROUP (LONDON)

During Ranganathan's visit to London in 1948, a Sunday was spent by him with D J Foskett, B I Palmer, and A J Wells in discussing faceted classification Eventually, a Classification Research Group took shape out of this This Group has been meeting regularly almost every month This Group has studied the Colon ideas in classification and designed 20 special schedules of classification on the faceted pattern as of the Colon Classification Moreover, it brought about an International Study Conference on the subject It met for a week at Dorking in 1957

56 FID/CA

Since 1951, Ranganathan had been the Rapporteur General of FID/CA the Committee on the General Theory of Classification Ranganathan had been sending his report to FID (=International Federation for Documentation) each year up to 1961 All his reports show the further developments in CC classification methodology in general and in particular Though CC and UDC figure as the "Guinea pigs" in these investigations, the results are all profound contributions to the discipline of classification

57 SPECIAL SCHEDULES

The FID Conference in 1954, discussed again classification problems as given in the report of Ranganathan In 1955-56, Ranganathan was in Zurich Some European librarians came to him to prepare special schedules D J Foskett came to prepare his schedule on "Occupational Health", Langridge came for designing a "Management" schedule. Ranganathan himself finally designed the Management schedule.[9] Ranganathan sent to the FID his eleventh report on General Theory of Classification, in 1961 It laid down the Principles for Facet Sequence

58 CONFERENCES AT WASHINGTON AND CLEVELAND

In 1958, Ranganathan was again invited to the United States to attend the International Conference on Scientific Information held in Washington. He was invited also in 1959 to the Cleveland Conference on Common Language for Coding. New ideas in classification were forthcoming. Many of the papers presented at these conferences were on the Facet Analysis of Ranganathan

591 INTERNATIONAL CONFERENCE ON CLASSIFICATION

An International Study Conference on Classification for Information Retrieval was held in Dorking (England) in May 1957. The Conference was sponsored jointly by FID, ASLIB, University of London School of Librarianship and Archives, and Classification Research Group, London The object of the Conference was to study the modern ideas on classification largely due to Dr Ranganathan and their application to Information Retrieval. The conveners of the Conference had stated

> "This Conference will be a development of all Dr Ranganathan's work in the last 20 years and it will be a means of spreading interest in his work and appreciation of it "

The Conference was attended by some 40 experts with representatives from France, Germany, India, Italy, Netherlands, Unesco, United Kingdom and the United States of America Ranganathan was invited to deliver the opening address of this International Conference The Conference, in their conclusion and recommendations, discussed the scope of classification, the scheme of classification, the need for research, use of classification schemes, construction and application of schemes, notation used in a scheme, and the development of classification scheme The main decision of the Conference was the acceptance of *Facet Analysis as the basis of classification*

6 Editions of CC

CC has taken seven births. During the 18 years of its existence, it has even undergone a *Kaya kalpa.* The first edition came out in 1933 followed by the second in 1939, the third in 1950, the fourth in 1952, the fifth in 1957, and the sixth in 1960 and the seventh in 1963 The changes in the editions 2 to 3 were not many and in fact related only to certain changes in terminology and sequence. With the development of the subject and the invention of the new devices, techniques, and principles, the schedules were improved

A true change came only in edition 4, which implemented the concept of Five Fundamental Categories, Rounds, and Levels

61 EDITION 1

The first edition of CC was released after the scheme had been experimented in the Madras University Library It forged a new ground in classification The class numbers were not ready-made It provided a variety of combinations. It also gave co-extensive class numbers and provided for the interpolation of new subjects

The salient features introduced in the scheme were as under

1 Use of a large base conforming to the requirements of the universe of knowledge,
2 Use of mixed notation for poviding wider matrix,
3 Distinct species of symbols like Roman capital letters for basic classes and Chronological Device, lower case letters for common sub-divisions, Arabic numerals for schedules proper, Generalia class and other divisions, "colon" for separating facets, '0' for Bias Relation.
4 Definite order of facets for each Basic Class,
5 Enumeration of each facet in a Basic Class,
6 Enumeration of foci in each facet,
7 Special schedules for Common Subdivisions, Geographical Divisions, Language Divisions,
8 Use of Octave Notation,
9 Use of eight devices *viz* Colon Device, Geographical Device, Chronological Device, Favoured Category Device, Classic Device, Subject Device, Alphabetic Device and Bias Number Device,
10 Provision of rules for constructing class numbers,
11 Use of Phase, and
12 New techniques of constructing Book Number

62 EDITION 2

The next stage in the development of the Colon Classification was the release of the *Prolegomena* in 1937.[11] Ranganathan derived a set of basic principles of classification 28 Canons were enumerated Several Devices were described. Unscheduled mnemonics was introduced and a comparative study of several classification schemes was made.

As a result of this theory, CC was slightly modified at several places. The second edition was released in 1939. The following changes were witnessed in this edition

1 To satisfy the Canon of Currency, the following terms were changed:

Ed 1 Philology	*Ed* 2 Linguistics
Ed 1 Politics	*Ed* 2 Political Science

2 Anthropology was transferred from History to Sociology,
3 The following principles and devices were introduced:

Last Octave Principle,
Penultimate Octave Principle,
Auto Bias Device.

4 A new Main Class Mysticism was introduced represented by a Greek letter,
5 Schedules were added for

Mechanics,
Veterinary Science,
Ancient Tamil Poetry,
Jainism,
Buddhism,
Judaism,
Christianity,
Zoroastrianism, and
Anthropology

6 Schedules of Common Subdivisions, Sound, Electricity, Technology, Biology, Public Health, Indian Philosophy, Sociology and Law were revised and redesigned
7 The schedules of Classic Device were enlarged
8 The order of the facets of Law was rectified
9 3,000 examples were worked out and added as Part IV of the scheme.
10 The scheme comprised of four parts as under

Part I	Rules of Classification,
Part II	Schedules of Classification,
Part III	Index of the Schedules;
Part IV	Examples of Call Numbers.

63 EDITION 3

A new ground in practical classification was broken by the release of the *Fundamentals* in 1944[12] It gave a detailed and systematic procedure for constructing step by step class number according to CC and DC. It also introduced the concept of facet and focus and stated for the first time the concept of Five Fundamental Categories (Personality, Matter, Energy, Space and Time) as a basis for classification

Another development took place in 1945. The *Elements*[13] was released It gave a simple exposition of the principles of classification which formed a criteria for determining helpful sequence among the subjects

The third edition of CC introducing a few changes and incorporating the ideas as developed in the *Fundamentals* and the *Elements* was published in 1950 It contained the following features

1. Adoption of the terminology of foci, facet and phase,
2. Introduction of Phase relation and the provision of connecting symbols for the different kinds of phases; Biasing phase, Tool phase, Aspect phase, Comparison phase, Influencing phase, Relation phase
3. Gave a separate schedule on Indology with ready made numbers according to the Classic Device This was given as Part IV of the scheme.
4. Abolition of Part IV of Edition 2
5. The concept of Amplified Main Class introduced in Physics and Education
6. Prescription of the symbol "-" for the favoured language in Literature
7. Provision in the Rules Part, the table of facets for Common Subdivisions
8. Introduction of the following Devices

    1. Evolutionary Order Device
    2. Mnemonic Device
    3. Octave Device
    4. Auto-bias Device

9. Recasting of the Rules in Part I according to the latest terminology
10. Providing key to the initial letters by which the names of the facets were represented

64 Edition 4

A fundamental change took place in 1950 Ranganathan brought out the *Philosophy*[14] in that year and analysed the capacity of notation for depth classification The concept of Optional facets forged a new ground and a series of articles appeared on this new concept in the *Annals* Part of the *Abgila* CC therefore, entered the domain of documentation The concept of the Five Fundamental Categories as stated in the *Fundamentals*, took a concrete change The discussion in the Library Research Circle at Delhi from 1950 onwards and the Delhi Seminar on Library Science, clarified several ideas and prepared CC for a *Kaya kalpa*

CC took its fourth birth in 1952 just after two years of its third birth. It came out in a new form, injected with new terminology and ideas, and invigorated by new connecting symbols to separate each facet.

This edition introduced a few changes. These are listed below

1 The concept of Optional Facets developed for Depth classification has been incorporated;
2 The Five Fundamental Categories have been enumerated and used for facet-analysis,
3 Different connecting symbols for facets belonging to different Fundamental Categories have been used Colon "." was used previously for all cases,
4 Common Subdivisions have been rationalised into three categories as under

  1 Anteriorising Common subdivisions
  2 Posteriorising Common subdivisions
  3 Form part of Book Number

5 Generalia class represented by Arabic numerals has been replaced by a lower case letter. This has created separate places for Generalia material connected with a specific area or with a specific author
6 Arabic numerals used in the earlier editions for Generalia class have been used for a set of preliminary main classes called Prels These were as under

  1 Universe of Knowledge
  2 Library Science (Already provided in earlier editions too)
  3 Book Science
  4 Periodical publicationism
  5 Encyclopediology
  6 Bibliographiology
  7 Biographiology
  8 Institutionology
  9 Communicationism
  98 Standardization.

7 Main classes have been enumerated and the facet sequence changed on the basis of the Fundamental Categories. This has been done in Library Science and Chemistry The order of the facet has been [P] : [E] instead of [E] · [P] as in the earlier editions.
8 Precise terminology has been used and the Rules made specific and terse
9 Examples of class numbers have been given under each class in the Rules part.

10 The Alphabetical Indexes to the schedules of Geographical divisions, plant, crop and animal divisions of Botany, Agriculture, and Zoology have been provided immediately after their respective schedules
11 The Facets have been enumerated under each subject in the Rules part giving the manifestation of fundamental categories changed from the terms used for facets in earlier editions
12 Among the Main classes, Partially Comprehensive Main Classes have been introduced with Greek letters. The additions made are as under
    Mathematical Science
    Physical Science
    Animal Husbandry
    Humanities and Social Sciences
    Social Sciences

13 The schedule of Indology has been further expanded providing with a separate index.

65 EDITION 5

Further examination on the basis of the latest ideas on classification has been continued The idea of 'Apupa' pattern for securing helpful arrangement even with regard to micro-documents was created in the *Classification and communication*[15] and analysed Depth Classification symposium at the Tenth All India Library Conference in 1953, forged a new ground and clarified several ideas The *Annals of library science* continued to publish the results of further investigations in the subject. Several special schedules were designed in consultation with Ranganathan while he was away in Europe The result was the fifth edition. It was released in 1957

The following changes have been introduced

1 The edition has been confined to Basic classification,
2 An alternative schedule for geographical divisions of India has been provided on the basis of the reorganisation of the Indian States,
3 Separate schedule for Phase and Intra-Facet relations was added,
4 The Canonical divisions of Fine Arts has been revised by using capital letters in the place of numerals,
5 The schedule of Management and Labour have been redesigned,
6 Substantial additions have been made in the schedule for Law;
7 The details in the schedule of Agriculture as given in edition 4 has been omitted;
8 Canons of classification have been listed,
9 Contractions used have also been listed,
10 A new Main class for Mining has been created with a Greek letter.

66 EDITION 6

The sixth edition of the scheme came out in 1960. There were not many additions in this edition. The few changes were as under:

1. The Greek letters, representing the Main Classes ‘Mining’ and ‘Animal Husbandry’ have beenc hanged into HZ and KZ without disturbing the order of the Main classes in the schedule,
2. A new Partially comprehensive Main Class NZ representing Language and Literature has been created,
3. A selection for the schedules for second levels of Time and Space facets and Common Energy isolates has been provided,
4. Energy schedule for Nuclear Physics and Nuclear Engineering has been introduced,
5. The subject facet has been brought over from second to the first level in the second round of the Main Class ‘Education’,
6. The detailed schedules of J Agriculture have been omitted as these were not found necessary for classifying macro-thought,
7. The chapters of the Part “Rules” have been reorganised and partly rewritten, and
8. The schedule for Book Number has been made the very first schedule of Part 2

67 EDITION 7

Edition 7 is in the making It is understood that a vital change is being brought about regarding the connecting symbol for Time facet The Time facet till now was having the same connecting symbol as provided for the Space facet It was a “dot” This created difficulties at the documentation level[14] and so a new symbol ‘ ‘ ’ has been introduced

7 Features

It would perhaps be necessary to enumerate the features of CC after having examined the various editions of this scheme and the changes brought about. It will help in understanding the necessity for and the utility of introducing changes edition to edition. The features of the CC are briefly as under

1. It is an analytico-synthetic scheme. It does not provide all possible classes in a single schedule as in other schemes;
2. There are about 200 short unit schedules. By their permutation and combination one can construct class numbers to the order of 10^{10}. This is far greater in number than in any other scheme;

3 Every subject gets individualised, and this provides for co-extensive class numbers,

4 It provides for infinite hospitality in chain and array of classes. Its hospitality is not limited as that of other schemes,

5 It is based on the Five Fundamental Categories—Personality, Matter, Energy, Space and Time. This makes it a self-perpetuating scheme of classification,

6 It provides for Facet-Analysis at all levels;

7 Many types of relations within a subject and among the subjects can be represented It provides for Intra-facet and Inter-subject, and Intra-array relationship. This is not possible in other schemes,

8 It provides for Systems and Specials in each basic class This is hardly to be found in other schemes,

9 It has provision for several kinds of facets of Common Isolates They are Anteriorising Common Isolates applicable before Space Isolate, after Space Isolate, and after Time Isolate There are Posteriorising Common Isolates corresponding to each of the Five Fundamental Categories Such a categorisation and hospitality of Common Isolates is not provided in other schemes,

10 It bases classification on a number of postulates These are not taken from any metaphysical system They are chosen because

   1 They secure filiatory arrangement among the known classes of knowledge,
   2 They are able to find for a newly emerging class a helpful place among the already existing ones without disturbing their established position,
   3 They are of additional help in making CC a self-perpetuating scheme of classification and thus secure a longer expectation of life for the scheme,

11 It implements the findings in the idea plane by providing

   1 Roman lower case letters to denote, phase-relations, and for zone 1,
   2 Indo-Arabic numerals to denote geographical isolates, language isolates and certain classes, and for Zone 2,
   3 Roman capital letters to denote chronological isolates and most of the main classes, and zone 3,
   4 Packeted class numbers for Zone 4,
   5 Sector notation in which digits, z9, Z are empty digits without any semantic significance These secure Hospitality in Array and a means of extrapolation,
   6 The concept of Emptying digit is now being developed to secure interpolation of new main classes and array isolates at any point This new device has been hit upon only recently,

7 Connecting symbols represented by punctuation marks,
8 Group notation to secure further Hospitality in Array;
9 Mnemonics—Scheduled and Seminal—which give autonomy to classifiers,
10 Zone Analysis as enumerated in categories 1 to 4,

12 It introduces the following Devices to create or sharpen a focus in any facet

1 Chronological Device
2 Geographical Device
3 Mnemonic Device
4 Subject Device
5 Alphabetical Device
6 Superimposition Device

13 It provides for Classic Device to bring together the different editions of a classic in a class, the different editions of each of the subcommentaries of each of its commentaries and so on This is not provided for in any other scheme of classification,
14 It bases the divisions of classes, sub-classes, sections and sub-sections on literary warrant and is free from national bias, a fault often found in other classification schemes,
15 It provides a new basic class for the pure methodology implied in any other basic class by notation devices such as Interpolation Device and Packet Notation Device The need for this does not appear to have been felt by the other schemes,
16 It provides special attention to Book Numbers These form to some extent an integral relation with class numbers This is new in this scheme,
17 It satisfies all the Principles of Helpful Sequence and the Canons of Classification, and
18 It is universally applicable without any change both to macro-thought and micro-thought In other words, this is a scheme fit for book-classification as well as for documentation work

8 Future

As a result of the features enumerated in Section 7, CC is a classification scheme which is capable of surviving for years to come. It has revolutionized the very basis of classification. This is not always so in other schemes. A comparative study of Edition 14 and 16 of DC will bear testimony to this. It has a scientific foundation and has all along been keeping its pace with the latest theories of Ranganathan. The resulting changes in class numbers have got two important features: 1 It is only a digit here and there that has to be changed This change of digit does not usually lead to change, in the position of the class It is needed only, to meet newly emerging situations in depth classification. Therefore, there is normally no urgency to change the digits in all cases immediately. The change may be made in due course Indeed it can be extended through a long stretch of time In other words, it can be done at leisure as pick-up-work, 2 Even the change in the digit can often be made without the necessity of rewriting the whole class number

One has to acknowledge the utility and soundness of a faceted classification as represented by CC Indeed the outstanding contribution of CC which will perhaps survive even long after CC might go out of use, is the concept of Facet-Analysis The Classification Research Group, London, have brought out 20 special schemes of classification of the faceted pattern Gone are the days of the enumerative pattern The universe of knowledge today appears before us in facets and phases

It is however felt that the scheme should have a schedule and an index of ready-made class numbers more or less for use in small general libraries Such a schedule will enable semi-professionals and perhaps even non-professionals to apply the scheme The wide use of DC in spite of its outmoded enumerative pattern and several defects, is traceable to its having a schedule and an index of ready-made class numbers CC is included in the syllabus of all the library schools in India—professional as well as semi-professional Till we have a sufficient number of teachers with painstaking earnestness to teach classification as a discipline and rather than using a ready-made index, it may be necessary to provide a schedule of ready-made class numbers and index as already stated

The introduction of Greek letters in main classes had created difficulties in typing and printing the class numbers Edition 7 has found a simple method of doing away with Greek letters, except the universally used symbol △ 'Delta'

81 ORGANISATION

The scheme is a national scheme for India and should have an organisation to examine it and develop it from time to time Dr Ranganathan may be able to do it single-handed but it would be difficult and almost impossible for anybody else to carry forward the scheme single-handed after him Hence there is need to create an organisation to take up this work FID and some of its participating national bodies do this for the UDC There is a cell in the Library of Congress to do this for the DC. The Library of Congress is of course looking after the development of LC. Similarly India should entrust this task to some definite organisation The Indian Standards Institution, the INSDOC, and the National Central Library when established, may take charge of this important national work jointly and severally Another line of action might be the establishment of a special foundation for the object

The Late Donker Duyvis, Secretary General, FID, has stated that of all the schemes of classification, it is CC and UDC that are bound to survive, since both are "bibliographical classification". He has however desired that both these schemes should be brought together, and any person who could do that, according to him, was the author of Colon Classification.[17]

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CHAPTER C2

Colon Classification: The National Scheme of Classification for India

R S Parkhi

0 Analytico-synthetic Classification

It was in 1924 that Dr Ranganathan laboured hard and devised his ingenious Colon Classification, though its 1st edition was actually published in 1933. He then found that the existing enumerative schemes of classification were incapable to cope with the constant development in the field of knowledge. They were also incapable of giving expressive class numbers for a large number of new subjects. The main drawback in these schemes was that the different facets of subject were not properly analysed and represented in class numbers. He, therefore, prepared the frame-work of his Colon Scheme like Meccano apparatus for constructing expressive class numbers for subjects of any depth. He has, so to say, devised an analytico-synthetic scheme of classification in which class numbers have to be constructed according to the prescribed formula and rules with the help of the schedules of fundamental constituent terms. This is altogether a departure from the existing enumerative schemes of classification.

1 Encomia from Abroad

The importance of this scheme as a new approach in the development of classificatory thought was realised from the very beginning by the leading thinkers in the field. The late W C Berwick Sayers calls it as "universally interesting as a study in classification method." The late H E Bliss says, "the main principle is that of complex or composite classification. This principle is more than fundamental in this system; it is pervasive. Ranganathan has developed it with admirable ingenuity and consistency."

2 New Features

Throughout the development of this scheme, Dr Ranganathan has applied scientific method and this has resulted in the introduction of some new features in it. One of these features is the recognition of five types of facets based on Five Fundamental Categories. Now this scheme has become eminently fit for documentation work. It has acquired great versatility to do any degree of depth classification.

3 New Techniques

During the course of the last 28 years the scheme has grown from strength to strength It has developed in various directions It has become quite competent to classify macro thought as well as micro thought. During this process, it has sharpened many of its techniques, such as Facet, Focus, Phases Fundamental Categories, use of different connecting symbols, versatility of notation, and analysis of Zones, Rounds, Levels, etc The editors of the *British national bibliography* are now using its technique, as a guide in sharpening the Decimal Classification Numbers The International Federation for Documentation has officially adopted the Octave Notation of this scheme. It is also used as a basis for studying the foundations of a general theory of classification The librarians in the European countries are showing keen interest in the techniques of this scheme Thus the contributions made by this scheme to the development of theory of classification have been generally accepted.

4 Merit Recognised

Looking at the marvellous progress made by this scheme during the short span of its life, one naturally wonders why it is not being universally used by libraries in the country where it was born To remove this sad condition, it is the considered opinion of the writer of this article that all our libraries—large and small—should be got uniformly classified according to the latest revised edition of this scheme Without any hesitation, the whole fraternity of librarians in India must decide to adopt it in spite of the various difficulties that they may have to face The difficulties are quite superfluous if one determines to face them The greatest obstacle in the way of the noble object of making our libraries the haunted shrines of learning is the unpardonable apathy shown by so many librarians in our country towards the attempts of popularising this scheme that have been made so far by those few librarians who are convinced about its distinctive merits and the appropriateness of making it the national scheme for the libraries in our great nation.

5 Training Course

Fortunately for us various universities in our country have now been conducting training courses in library-science But very few of them have made proper arrangement for teaching this scheme. It is these training courses that are expected to make arrangements for teaching the subject of classification to the students in its right perspective. The superficial teaching of classifying books according to the Decimal Classification is mainly responsible for the utter ignorance of so many, so-called trained librarians regarding the superiority of the Colon Scheme over the Decimal Scheme The students attending these training courses must be taught to study critically both DC and CC with the aid of the touch-stone, i e by discussing them thoroughly against the background of the Canons of Classification enunciated by Dr Ranganathan in his *Prolegomena*

6 Canons of Classification

Canons of Classification are of primary importance for the study of classification They serve as a touch-stone to decide the efficiency or otherwise of a scheme of classification A gold-smith is able to assess the quality of the metal in his hand by rubbing it on the touch-stone and while doing so observing scrupulously the method and skill developed by him or learnt by him from others He can then remove the dross and make it finer Similarly a classificationist i e the author of a scheme of classification is able to give the desired fineness to his scheme of classification by observing scrupulously the directions laid down by the Canons of Classification

61 OBSERVANCE OF CANONS

It is therefore, necessary for every student of classification to study these canons with a view to seeing how the DC and CC observe or violate them For the proper study of these canons it is quite essential to prescribe the *Prolegomena to library classification* as the main text of the study for all the Diploma Course in Library Science in India This is an indispensable classical work and a vademecum of classification for librarians This work if properly taught will enable the students to compare the DC and CC in their perspective and will convince them about the superiority of the CC over the DC

7 Influence of the Scheme

The DC of Dr Melvil Dewey has undoubtedly revolutionised the ideas of librarians regarding library classification But in 1876 when it was published in the USA the genius of Dewey could not imagine that the rapid progress in the field of knowledge would require a Meccano Apparatus in the form of the Colon Scheme to satisfy the growing requirements of the advancement of knowledge in the 20th century. To bring this to the notice of the library world another great genius in the unique personality of Dr Ranganathan was quite necessary and this has so happened. We are very fortunate and proud to have that personality among us in India itself The eulogistic remarks about Dr Ranganathan of the late W C Berwick Sayers in his preface to the second edition of the *Prolegomena to library classification* are worth quoting here He says—"All through the years in spite of his occupation in India and in both hemispheres with other general and special problems of librarianship, his work on classification continued so that now there is hardly a classifier who has not felt his influence ”

8 National Classification Scheme

The DC was devised in 1873 with the main object of making it suitable for adoption in the then libraries in the USA and is known to have been found quite inadequate and unsuitable for adoption in our libraries, especially for classifying the enormous resources of oriental literature possessed by so many of our libraries When this fact is known by so many Indian librarians it is surprising to see that they are blindly classifying the resources of the libraries in their charge according to the DC and thus causing a considerable inconvenience to the readers of these libraries and ultimately wasting enormous amount of money and energy for this unscientific work that is being done at present in a large number of our libraries It is worth noting here that during the year 1946-47 Dr Ranganathan reclassified according to his Colon Scheme about 100,000 books of the Banaras Hindu University Library within a short period of about 18 months when he was occupying the post of the Librarian and professor of the library science in that University at the invitation of Dr Sir S Radhakrishnan, the then Vice-Chancellor of that University This he did along with all other duties such as teaching and execution of administration work that fell on him at the age of 56 So it can be easily seen that the younger librarians in the various Universities and research institution in India should not find it difficult nor plead impossibility of reclassifying the resources in their libraries according to the latest edition of the CC by following the method of Osmosis recommended by Dr Ragnanthan This is just possible for them because recently these libraries are being provided with a fairly adequate trained and competent personnel The libraries in the various national laboratories, government departmental libraries and other libraries which are directly under the control of the State and Central Governments must be got reclassified according to the CC and it should not go difficult for the governments concerned to provide adequate staff required for this most essential and urgent work If the governments concerned decide to take lead in this matter, it is certain that private institutions will immediately follow this most admirable example and thus we shall find an easy solution for this most important problem of reclassifying our libraries according to the CC which is decidedly our national scheme of classification

81 RESPONSIBILITY OF THE NATIONAL LIBRARY

It is the primary duty of our National Library to open a permanent department for carrying on research for the further development and revision of the CC which has been done at present single-handed by the author himself with exceptional zeal and vigour at his advanced old age It is a pity that younger librarians are not coming forward to do this work under his guidance for the sake of proper setting up of our libraries and the library profession in India The National Library should also get the scheme translated into all the major Indian languages and publish these translations as early as possible so that those libraries that possess literature in a particular language can give class marks in the letters of the alphabet of that particular language for the conveniences of the workers and readers of these libraries The author has already provided the latest revised conversion table of Nagri characters for the main classes of the scheme in the second edition of his *Library manual*

91 Debt to Dr Ranganathan

The right way of acknowledging the profound debt that the library profession in India owes to Dr Ranganathan is to adopt his Colon Scheme of Classification in all the libraries as early as possible so as ultimately to make it the National Scheme of Classification for our great nation in its real sense and thus give a sound and permanent footing to the most important work of classification in our libraries, as in the words of Sayers 'The foundation of librarianship is classification. Without classification no librarian can build up a systematic library'

CHAPTER C3

My Thoughts on Colon

JATADHARI MISRA

1 Importance of Classification

THE problem that confronts the librarian most after the assumption of power is the classification of his library. After swallowing and digesting a number of authorities like Dewey, Ranganathan, Palmer, Sayers, Jevon, Mann, Richardson, Cutter and Brown he is thoroughly puzzled and is unable to decide his most favoured scheme. The most popular Dewey is put into operation everywhere and when the question of classifying books on Indian literature is faced, the librarian takes resort to something of his own personal invention or modification. Different libraries have adopted different procedures to solve this problem. Only then they realise that Colon Classification (=CC) in spite of its complexity, is more suited to the Indian soil than any other scheme.

2 Colon Classification

Personally I am a good lover of CC. Its newness puzzled me first but after I was thoroughly acquainted with it, it became my most favoured scheme. Really I was astounded and at heart thought of that intellectual jargon who had invented the scheme. But all my zeal faded away when authorities forced me to stick to Dewey and now I am reaping the bitter fruit of the mistake. I think Indian libraries one and all should follow this scheme to make the efforts of Dr Ranganathan successful and his mission of life fulfilled. It has a broad base to incorporate each and every field of knowledge. Though it has the notation of the mixed type yet it is far superior to Dewey and other schemes having pure notations. The notation is also very brief, mnemonic and flexible. Of course it cannot be at once handled and tackled by a raw hand fresh from the school or college. A thorough understanding of the scheme is necessary before the classification is attempted. But it is flexible, expansible, adjustable and hospitable.

3 Achievement of Colon Classification

The residual classes are meant to accommodate the new classes that will come into existences. Every field of knowledge has been given an independent place.

The classes are ideal. The branches of knowledge have some logical background The device for book number is quite satisfactory The scheme is not partial In fact, it is the *best* scheme suitable for classification of books in Indian libraries where books in Indian language, literature, philosophy and religion are in abundance Books on Indian literature, philosophy and religion have practically no place in schemes like Dewey where they have been relegated to the background The Canon of Distinctiveness is satisfied by beginning the common subdivisions with the lower case letter There is provision for further amplification of common subdivisions geographically and chronologically In CC the extension and intention exactly fit the titles Unlike DC, mathematics includes applied mathematics and statistics which is quite natural In chemistry any substance can be individualised and the notation is very short and co-extensive The order of classes in Philology is quite natural. In Philosophy and Literature, Indian literature and Philosophy have been given proper place. In Economics, CC is more practicable It has given a separate place to Psychology Every scientific field has been given an independent place and so also subjects like Education, Geography, Politics, Economics and Law It is always changeable in keeping with the advancement and changes in the universe of knowledge

4 Study of Colon Classification

Though of Indian origin, the scheme has been recognised as a text for students of profession all over the World, specially in UK and USA, and the author of the scheme has now been proclaimed as the internationally reputed Indian Librarian

5 Classification Scheme of India

In spite of its adaptability, CC has not received wholehearted reception from every Indian library Some of the librarians condemn it for its complexity but at the same time they are ignorant of the treatment meted out to us in the other schemes of classification They blame it for its constant change and modification but no scheme of classification is free from this blame Every scheme of foreign origin changes from time to time and this change is inevitable and unavoidable in this atomic age of manifold discoveries and inventions It is the classifier's look-out to assign a proper place for every new subject in his scheme. It is rather ironical that after introduction of this scheme, the author has created many rivals in his Motherland and friends in the foreign lands Classification of the entire field of knowledge is not an easy task and Dr Ranganathan has done it most successfully It is said of him that intellectually he is a giant and he is so hardworking that he took himself the trouble of classifying the entire stock of one university library in his own scheme when he was in its faculty of Library Science In his native land and abroad, he has always tried his best to better the lot of the persons engaged in the profession and it is his sole desire to see the Indian librarians on a better footing. In spite of all prejudices and narrowness, and in the teeth of all opposition and criticism Colon has no doubt occupied a prominent place in the library profession as is regarded as the completely analytico-synthetic scheme of classification suitable for Indian librarians Like other publications, the scheme deserves translation in other Indian languages specially in Hindi to make it understood and applicable by one and all Now that the efforts are being made to find out the Hindi equivalent of every word—scientific and technical—this won't be something beyond comprehension and practicability I wish a long life and a happy future to the author and tender my best regards and gratitude

CHAPTER C4

Colon Classification in Gujarat

G P BAROT

1 Reorganisation with Colon System

CELEBRATING the 71st birthday of Dr Ranganathan is to me like celebrating also my love at first sight, prefaced already by 'love at first hearing' of his new system of classification. In 1949, when I was transferred to the post of the librarian of the Gujrat Vidyapith Granthalaya, my predecessor in office, Mr Pandurang Deshpande had already decided upon reorganizing the library on the basis of the Colon system.

2 Gujarat Puratathva Mandir

Although I was the curator, for half a decade (1923-28) of the Gujarat Puratathva Mandir, a Research Branch of the Gujrat Vidyapith of Mahatma Gandhi at Ahmedabad, I had no detailed expert knowledge of any established library classification. They were good old days. Except in the Baroda State, system of library practices on scientific lines were, perhaps, not the rule. Names of broad subjects were labelled on the racks and books were arranged there by authors. The number of the rack and the arrangement number of the book on it were then jotted down on the lower part of the books. It sufficed to mechanise the arrangement. A complete list of books on every rack was hung for reference. The institute being a research one, no book went out of the library and readers being few, there was no difficulty.

3 New Job and Study

After a lapse of a few years of satyagraha and a few more of the work of compiling the well-known *Sartha Gujrati Jodni kosh*—a standard book of reference in the Gujarati language—when I was transferred to the above said library, I had to study all the books on library science at our command, before I could venture on the new experiment. Fortunately we had a very good collection and I had no difficulty in understanding the science.

31 Study of the Colon Classification

Being a nationalist and connected actively also with a nationalist institution, the very mention of an Indian master of library science, who had devised a world famous new system of classification, was sufficient to attract me. When I first began to study the Colon Classification, my feelings were of love and joy and pride But the more I studied Ranganathan, the more I was enamoured of his classification and finally convinced of its superiority.

4 Mathematical Accuracy

The brevity, the logicality, the clarity, depth wherever required, and the mathematical accuracy, impressed me the most. A new and difficult jargon and the complexity of arrangement of values of the various constituents of the Class Number and Call Number was, at first, puzzling and sometimes annoying I felt and still feel that the understanding of Dewey Class Number is wonderfully simple and easy The Decimal Classification schedule being enumerative gives ready made numbers They are easier to refer and note down But that is all

41 A Master Key

With the Colon Classification in hand there is no need to have a giant schedule of the Dewey type How self-comprehensive and self-expansive is the Colon Classification? One travels as if all over the universe with only a small book which holds a master key! While constructing Class Numbers, I always feel within me a creative joy, which I lack in other systems

42 Language with Grammar

I have heard it often said that the Colon Classification is complex It is surely complex but a highly developed language can never be as simple as the primitive A new born babe knows only one general cry for expressing all its needs and demands, but a fully grown up man has many more distinctive words to specify its various needs and difficulties or wishes And a pundit has a whole vocabulary and knowledge of full grammar of a language at his command!

5 Colon System Introduced

But this is not all The Gujrat Vidyapith Granthalaya was a pioneer in introducing the Colon System in Gujarat and it had also all the special difficulties of a pioneer Therefore, when it came to actual practice, we had to fix our limits. We had a whole library of nearly fifty thousand books, and many more periodical files to classify. We therefore decided to drop book numbers, and continue arranging books by the first three letters of the surnames and names of their authors In accordance with them, we also decided not to go beyond the Problem division in Literature

We had many books in which the year of publication was not mentioned We could not wait till the year of publication was found out or imagined In literature, we had similar difficulties of constructing the author numbers in our present state of information of books in the vernaculars

The Colon has been introduced in many more libraries in Ahmedabad and elsewhere in Gujarat since then They all have similar difficulties and almost all of them have adopted similar shortcuts

51 Modifications

I know Dr Ranganathan would not approve of all these shortcuts, and alternated editions of his glorious system I know also that the work of classification cannot be done over and over again in libraries Its very cost becomes prohibitive and as books increase, the amount of effort necessary also becomes Herculean. And therefore as time goes, the alteration will tend to be permanent and therefore a caricature of a renowned system

6 Scheme with Various Depths

But what to do The Decimal Classification specifically makes provisions for various depths and various class numbers and gives us a wide choice The colon system has no such specific provision It only puts forth an ideal system in all its glory and all its fulness I ask whether it should not also make provision for various levels of customers In practice Colon Numbers are briefei and more expressive Therefore if in practice such cuts as the above were officially permitted Ranganathan will become more popular

7 Books on the Colon Classification

With all love and admiration for the colon system we at Ahmedabad find it difficult nay impossible to change and follow all the changes and revolutions of Dr Ranganathan The result is that our numbers become fossilized I have prepared, and the Gujarat Pustakalaya Mandal of Ahmedabad has published two books 1 *Ranganathan vargikaran* and, 2 *Ranganathan suchikaran*. The former is already being t^ught in the Govt Certificate Course conducted in summer vacation every year It becomes very difficult to be up-to-date with a text book which will not bear a second edition for a number of years This should not happen

CHAPTER C5

Philosophy of Colon Classification

FLORENCE NADEJDE

1 Admiration for Dr Ranganathan

MY great admiration for Dr Ranganathan and my wish to bring my tribute to him on this occasion would have prompted my immediate and joyful acceptance, were it not for the material difficulties which make it impossible for me to travel to India at present and attend the celebrations; I shall join other many friends of Dr Ranganathan who, though kept away, will be at best fully present in mind and wishing with their hearts greatest fulfilment and happiness, as well as a long life to the great librarian, and the great Indian—Dr Ranganathan. As to the pleasure of writing a substantial contribution, I am afraid, it would be too late now for its publication. And what could I add to the more worthwhile and better qualified words of so many librarians, who, in India and abroad have had better opportunity either to work with Dr Ranganathan's system of classification or, better, known him personally ? I came myself late to librarianship ; and although already half through life, have only a few years' experience behind me.

2 Study of Colon Classification

During my library school year in Wellington, New Zealand, I had only a theoretical account of the Colon Classification and had to concentrate on the intricacies of the Dewey Classification. I remembered it however and, a couple of years ago, at the time when circumstances seemed to me favourable for a voyage to India, I rediscovered it and this time, took my time and studied Dr Ranganathan's scheme at its source, in his textbooks of classification.

3 Foundations of Classification

It has been no effort on my part, only the joy of following his eager and systematic mind and experiencing the greatest pleasure of all that of actually seeing every thing fall into place...watch the foundations of a great architectural work being laid, and the building erected stone by stone, harmoniously take shape and rise. My friend incapable of such creation, followed gratefully the teaching so masterly, so kindly imparted. Dr Ranganathan besides being a great mind bent upon research and capable to give librarianship its locus geometricus, or in other words, its basic structure in an organic classification, is also astonishingly understanding and patient with the tender mind and inexperienced, hesitant step of the fresher in library science

4 Foundation of Colon Classification

Could I myself judge how far, and how permanently the Colon Classification has systematised human knowledge—whether indeed the few principles laid as foundation-stone are the only ones—are capable of encompassing the whole and have deducted from them any particular answer for each individual problem ? I will not advance any such judgement, nor try to decide for myself on this point Having not actually put into practice the Colon Classification, I could not be a good judge of its intrinsic merits, nor suspect where its weakness, if any, may lie. It has taken me only a few winter nights to work along the lines Dr Ranganathan had devised for his students and admit that never before, in my library career have I felt such intellectual satisfaction at the perusal of any work set for study, and if, incapable to pronounce myself as to the absolute validity of the principles on which the entire scheme rests I could ascertain that the answer given in each problem, the translation in number or symbol of every individual meaning appeared so accurate, so true in every "nuance" that I believe myself entitled to induce therefrom the rigorous exactness of its basic set of rules

5 Philosophical Conception

This is as far as I could go I have not read Dr Ranganathan's work with the intention of improving myself in my career If it be true that I had at the time some hopes of being able to actually put this classification into practice in an Indian library, my intention in taking the book for study had been only to come to know India better through the mind of a librarian who was so very Indian in his philosophical conception of the world His every interpretation given to different intellectual concepts bears the imprint of a metaphysical mind, profoundly and harmoniously blended with the spirituality which, it seems, is all pervading in India

6 Levels of Interpretation

These things are hard to explain for those who have never felt the same personally What I mean is that an interpretation and translation of ideas can be provided more or less complete, at different levels In a business-like country. where time is money and material, tangible things—the only really important, a translation such as Dewey's will provide the answer and prove acceptable in spite of its drawbacks.

7 Ranganathan's Interpretation

Dr Ranganathan has done nothing more than just provide this same, adequate interpretation of life and knowledge for his own country And I wish to recommend the reading of his *Prolegomena to library classification* to all those who truly seek to know India and who have started their quest through their loving her, unconditionally, by accepting her contradictions as a right of birth, unquestioningly, as one loves one's mother A classification to answer the requisites of Indian librarianship could only be such as is Dr Ranganathan's deeply rooted in a metaphysical outlook in life, ethically and humanly conceived to take care of the finer most elusive aspects of the things of this world—meant to satisfy the eternal quest of the Indian soul for the eternal, real and unique being at the root of the manifold manifestation, without this Indian heritage I felt concerned, no one could have ever achieved a scheme of the amplitude and wholeness of Dr Ranganathan's And laying back my book, I felt grateful to him for being a librarian, and an Indian

8 Greetings

A very happy birthday to Dr Ranganathan coming a long way, from our part of the World, is most sincerely wished

CHAPTER C6

Ranganathan's Work on Classification

B C VICKERY

1 Contact with Ranganathan

IMMEDIATELY following World War II, it was my regular duty to visit the Patent Office Library in London to abstract recently issued patents. After my work was done, I naturally spent some time browsing among the books in that fine library, and one day I came across a slim volume published in Madras, the *Colon classification*, 1933. This was my first knowledge of Dr Ranganathan and his work. I learnt a little more about him from Berwick Sayers' *Manual of classification*, and was privileged to meet him for the first time in 1948. By 1950 I was sufficiently knowledgeable to make a wholly inaccurate statement about *Colon* in a published article on indexing. By 1953, I had advanced enough in my understanding to be permitted to contribute to "Optional facets" series in the *Abgila.*

2 Infiltration in World Librarianship

These autobiographical details are recounted only to illustrate the slow but steady infiltration of Ranganathan's ideas into world librarianship during the last 25 years. His position in that field has not been won without a struggle. Librarianship has been a craft, with the craft tradition of empiricism, and has not readily accepted the views of one who wishes to make it a discipline, with a theory and methodology of its own.

3 Life-Task of Ranganathan

Bibliographic classification has itself largely been empirical. There was much confused "philosophical" classification during the nineteenth century, based on subjective theory, and the classifiers of books rightly rejected this inadequate basis. But we cannot avoid theory: if we "reject" it, we succed only in producing an eclectic hotch-potch of incompatible theories and undigested facts. The Universal Decimal Classification has incorporated in this empirical way, an enormous mass of detail and a variety of notational devices, but without the discipline and consistency which a clear theoretical basis can provide The life task of Ranganathan in classification has been to make explicit the canons, principles, and postulates which may guide classificatory practice

4 Influence of Ranganathan's Ideas

Increasingly this disciplined approach to the problem of storing information for retrieval, has won acceptance For twelve years now, a Classification Research Group has met regularly in London, well aware of and much influenced by Ranganathan's views Many of its members have constructed faceted special classifications, some of which are in regular use for indexing "micro-thought" The UDC itself, in recently published schedules, has shown the influence of the "facet" approach Books by Ranganathan on classification have been published by the Library Association in London and by the *Libri* in Copenhagen Even in the USA the "fundamental categories" have found their way into a textbook on classification

5 At International Conferences

It has been my pleasure to be present with Dr Ranganathan at two recent international conferences in the United States, and it has been delightful to see how warmly his papers and comments have been received, and how his lucidity and fair-mindedness have been appreciated

6 Enduring Contributions

The possible use of electronic devices for information retrieval is causing, not only in the U S A, but also in the USSR and Europe, a great deal of fresh thinking about the problems of representing and arranging the subjects of documents The machine, far from menacing the functions of the human mind, is forcing us to think more deeply—for only by taking thought we can learn how to instruct the machine to perform its tasks These instructions must be systematic and precise, information in the machine must be stored in an orderly and helpful manner, the principles of a retrieval system must be clearly formulated All these requirements are paralleled by the work already carried out by Ranganathan for the Classified Catalogue Whether or not the solutions offered in the *Colon classification* are suitable for a machine system, Ranganathan's methodology is a model for all who work in this complex field It is this—the scientific approach to classification—which is his most enduring contribution to librarianship

7 The First Law in Use

It has been a great privilege and pleasure to know Dr Ranganathan during the last twelve years, and to study his many writings I have written here only of his work in classification, but perhaps to Indian readers his ceaseless campaign for a nation-wide grid of libraries, "to spread enlightenment across the length and breadth of the state," is of much greater practical importance Even if Ranganathan's "theoretical stuff" were to be forgotten, one thing will be remembered his never-ending effort to persuade his people—and all of us—to bring alive the First Law of library science—"Books are for use" My sincere felicitations to him!

PART D

FACETED CLASSIFICATION

CHAPTER DI

New Schemes of Classification: Principles and Practice

CHARLES A CROSSLEY

1 **Future Classificationists**

In this age of specialisation, the all-rounder of any depth at all has gone. This applies to bibliographic classification just as it does to all other fields of activity (not only scholastic either—the Olympic Games testify to that). The day of the single-handed compilation of a general classification scheme, then, has departed. Ranganathan's will probably remain the last of such attempts. Even Bliss only achieved a reasonable measure of collocation of related subjects because of the help of his 'scientific and educational colleagues'. And new scheme is unlikely to materialize out of the meditations of a hermit, however learned and however library-minded. (The analogy of library-minded hermits will not be pursued further for fear of embarrassment at the vision of hermit-minded librarians).

11 CLASSIFICATION RESEARCH GROUP

Only the work of a body of experts is likely to produce a new general scheme of book classification. Such a body exists in England—the Classification Research Group. The members are a small number of librarians and information officers who have been meeting almost monthly since 1952. Out of their deliberations has come forth no new general scheme—after nine years. There is not even a synopsis of one ! Nor yet a set of main classes ! Nor a proposed notation ! In fact they are currently discussing the nature of things, as concepts which may be classified, which may become the terms of a classification schedule.

All this sounds frighteningly like a domestic version of the situation existing in some large literary works. There is the case, for example, of a multi-volumed American biography of an eminent nineteenth century English writer, in which the first volume (of upwards of 1,000 pages) ended with the moment of conception of its hero !

111 Faceted Classification

But if the Group as a whole has not yet given birth, its individual members have been very active and productive After their early discussions they quickly realised both the need for a new general scheme and also the principle on which such a scheme must be built These they outlined in a memorandum published in the *Library Association record* in 1955 and also issued as the "Need for a faceted classification as the basis of all methods of information retrieval"—a memorandum published by Unesco and reproduced in an appendix to the *Proceedings of the International Study Conference on Classification for Information Retrieval* (1957) The title of this document fully expresses their belief in *faceted* classification.

112 Special Scheme

Fortified and inspired by this belief and aided by study of the one existing scheme explicitly intended to be a faceted classification—i e the Colon scheme—the members of the Group produced a series of special classifications, often with the severely practical aim of getting into a helpful order the stocks of their own libraries (for many of the original members of the Group were, in fact, special librarians who had found a real need for something more relevant to their collections than any general scheme could give them)

2 Universe of Knowledge

21 Macro Literature

It was the rapidity of advances in science and technology in an ever-more industrialized World which showed up the inadequacies of the traditional library classification schemes, for the libraries which served these interests had to cater for many kinds of literature (to use this term in its scientific setting, where it connotes only recorded knowledge and heeds not literary style of merit—beyond the simple requirements of displaying clarity) This literature came in many shapes and sizes, of which the traditional book was only one, rather insignificant unit—occupying a place in the universe of knowledge perhaps a *little* more important than that of this earth in its solar system on the edge of a not very impressive galaxy But the book has certainly lost its central place in the scheme of things—and it is the Galileos who now-a-days wield the big stick !

22 Micro Literature

Besides physical considerations, subject matter shows a great change in that the contents of the newer unit—the periodical article, the research report, the thesis, etc—tend to deal not with 'Flowers' not even 'Morphology of monocotyledons' but with 'Effect of fungal infection upon the respiratory metabolism of plant tissues', and other subjects of similar depth.

23 CRG SCHEMES

And so new special classifications have been devised They were produced before the days of the CRG, of course, but tended to be as individual in their principles and structure as were the librarians who compiled them. With the coming of these CRG schemes, a definite pattern can be seen—a family relationship is apparent

The question might well be asked here Is it practicable and sensible for a group of individual experts like the members of the CRG to produce a series of special classifications when their collective energy might well be spent on producing a general scheme on modern lines ?

3 **Special** vs **Universal Scheme**

Special classifications have considerable use in the ultimate work of producing a universal scheme (By universal scheme is meant one which covers all fields of knowledge within one cultural area—i e not a geographical area only, but one which encompasses common ways of life and thought, e g America and Britain, or Britain and Western Europe) Such special classifications provide the detailed coverage of their subject which is demanded of them by their users and cater for the manifold ways in which this subject is presented. Any general scheme will neglect to consider these schemes at its peril

If the special schemes are constructed in accordance with acceptable modern principles—the principles which will govern the construction of the general scheme—they may be fitted into this general system with advantage to both It is a bilateral advantage because the special classification has need of adequate treatment of its own marginal subjects, no special classification of a specific subject can exist in isolation

It may seem to be begging the question to advance the argument If a special scheme is constructed in accordance with acceptable modern principles, it will be suited to a general scheme based on the same principles Is it, in fact, the case that the same set of principles will 'do' for both levels of construction ? The Classification Research Group believes that this *is* the case These principles concern *facet structure* and will be returned to latter

It should also be pointed out that not only may special classification be suitable for incorporation into a general scheme, but, in addition, a general scheme may have removed from it the section dealing with a special subject This section may be used *with* or *without* alteration as a special classification It is essential to emphasize the 'with alteration' here because, as Barbara Kyle has shown (*ASLIB proceedings*, Sep 1960) the facets of a special subject may be rearranged to give a different sequence of literature without difficulty, if desired [1]

The time has come to look at a few of the special classifications prepared in the past five or ten years. It will be seen that those chosen are all non-traditional, nearly all faceted and usually by members of the CRG They are concerned with means of arranging material in systematic sequence, although it can be shown that such schemes may be—*should* be—of great utility even when devising methods of retrieving information from a file of documents, or its equivalent, which are *not* arranged in a systematic order

4 British Catalogue of Music Classification

This scheme was compiled by E J Coates of the "*BNB*" and has been used in the *British catalogue of music* since its first appearance in 1957 Because of this it has become perhaps the most widely known of the several faceted schemes compiled by members of the CRG (almost all the others have been applied within one library, usually an industrial library)

LAY OUT—The first thing which strikes one at looking at the pages of the British Catalogue of Music or at the schedules of the scheme is that a letter notation has been adopted—an alphabetical notation—with two letters not normally used, i e I and O—and with the addition of two symbols, the normal parenthesis and the oblique stroke It is also obvious that Arabic numerals have been used in certain places

41 ARRANGEMENT

The arrangement is as follows

The section with class numbers beginning A is for books on music and that beginning B is for books on individual composers, but the whole of the rest of the alphabet is for Music (Scores and Parts) Looking more closely at the items in class A, and those in classes C to Z it can be seen that the arrangements are parallel, i e that, for instance, ADW is for books about songs whilst DW is for songs in general A glance at the index will show that the subject index entries which lead to the classified catalogue are derived from Chain Procedure The class numbers given readily reveal their structure when several are compared Taking VOCAL MUSIC as a sample the following are found

Vocal music					CB
,,	,,	Arrangements for		Accordion	RSK/CB
,,	,,	,,	,,	Harmonica	VXK/CB
,,	,,	,,	,,	Organ	RK/CB
,,	,,	,,	,,	Piano	QK/CB

The common element here is obviously CB which is for Vocal music The first part of the class number in each of the last four cases ends with a K These are all class numbers for 'arrangements' of one form of music for a different executant and the K means simply 'arrangement *from*' ! Removing this reveals immediately the class number for music of the four instruments

Accordion	RS
Harmonica	VX
Organ	R
Piano	Q

It is obvious, then, that such an arrangement collects together all music for each instrument at one place This is because the first facet of the subject 'Music' is for [EXECUTANT]—or, to express it in different terms, the first characteristic of division is [EXECUTANT] (instrument or voice) In actual fact, this facet comprises more than one sub-facet, e g [SIZE OR COMPLEXITY OF EXECUTANT BODY] e g Part Choir or Quartet, [ACCOMPANYING EXECUTANT], e g Orchestra, Violin, and, in cases such as those of our example above, the [ORIGINAL EXECUTANT] where there are arrangements of music, e g organ, accordion

The next facet is the [FORM OF COMPOSITION] (e g March, or, Cantata) and this may be followed by [CHARACTER OF COMPOSITION] (e g Military or Christmas music)

In the case of musical literature (in Class A) there may be need for additional facets for, say, [ELEMENTS OF MUSIC] (e g harmony), [TECHNIQUE] (e g conducting) and, lastly, a common subdivision facet for forms, geographical and chronological elements

The points to note are

1 that not all these facets will be needed for every item to be classified by the scheme and that the classifier has perfect freedom to select and use only those which are needed, and

2 that no difficulty arises in building up class numbers for any item where more than one but less than all facets are required because there is a simple instruction to combine the various parts of the class number in a fixed order, and that is *reverse schedule order*

To take a simple example A plectrum guitar solo piece called 'Mexican Hat Dance' would be dealt with by analysing into facets as follows [EXECUTANT] Plectrum guitar, [EXECUTANT BODY SIZE OR COMPLEXITY] Unaccompanied solo, [FORM OF COMPOSITION] dance In this case the first facet is part of the main schedules and gives, under RW String instruments, a subheading T for Plucked string instruments of which one subdivision is TST Plectrum guitar The symbols for the class numbers to represent the other two elements of the subject are taken from an auxiliary table, giving PM for Unaccompanied solo and H for Dance. These parts are combined together in reverse schedule order, i e TST, PM, H to give TSTPMH for the subject

42 Analysis

Two things will have been noticed from this exercise First, that different letters of the alphabet may be used to introduce different facets, i e that a block of letters (in this case) are used for each facet, thus facilitating the synthesis which produces class numbers composed of elements arranged in a preferred 'combination order' This is a common feature of such faceted schemes and may be done with any kind of notation base

Secondly, the genus RW String instruments has two species RX Bowed and T Plucked string instruments The latter has for species (amongst others) TQ Harp and TS Guitar Thus it can be seen that the length of the notation in a class number and the actual symbols of which it is composed are no guide to the structure, the hierarchy of the scheme In fact, this use of notation is known as *non-hierarchical* Quite frequently a subdivision may possess a shorter class number than its parent subject This is economical of notation very often, in that it produces shorter class numbers for 'popular' subjects, subjects for which 'literary warrant' is great An example is to be seen in Q Piano, a subdivision of PW Keyboard instruments Symbols may be allocated in this way in direct relation to the frequency of use of the terms represented In special classifications, the majority of the material encountered will be of a great degree of specificity and the more general terms in a scheme will be of little use For convenience and specificity, why not make the numbers for the general terms longer and let the more-frequently-used terms have shorter representation ?

The scheme has now been published and may be examined in detail, and understanding of it is much aided by an admirable introduction by its compiler, whose investigations into notation have borne fruit in ingeneous manipulation

43 Success of the Scheme

This very brief glance at it does not do justice to the scheme although it is hoped that a few of the reasons for its proved success are now apparent, all of which can be summed up perhaps in one quality flexibility

5 Faceted Classification for English Electric Library

This scheme was constructed at the end of 1957 at the Whetstone Library of the English Electric Group for use in the Central Reports Files of internally published reports and in the *Abstract bulletin* published by the library

The scheme exhibits very clearly its *faceted structure* and demonstrates, as its compiler, Miss Binns (lately become Mrs Aitchison) said, that 'terms in the field of knowledge were grouped into broad categories according to characteristics which, because of their basic nature, may at times cut right across traditional main classes'. She has described her method or working in a pamphlet entitled *'A faceted classification construction and operation'*

The steps taken are similar to those described by B C Vickery in his *Classification and indexing in science* where his methods of constructing a scheme for Soil science are outlined

The first step taken by Miss Binns—and by anyone seeking to do the same job—was the surveying of the subject field (If this survey includes an examination of the literature existing in the chosen field, the classificationists (classification-maker) possesses valuable knowledge of the necessary scope and requirements of his scheme) Primary categories were then chosen These represent the facets of the scheme In this case they were

Industries and professions
Plant and machines
Components
Materials
Physical phenomena
Operations
Agent (Instruments and equipment)
Language and Form of publication
Geographical divisions

In actual fact, the leading category, based here on the products of this manufacturing concern, occupy the second place in the sequence, but the contents of the first facet are of use in subdividing subjects from other facets Ignoring this first facet, which serves to provide for related, marginal material—provision which all special classifications must make—the categories listed can be seen to bear some resemblance in both character and sequence to Ranganathan's PMEST, *i e* Personality, Matter, Energy, Space and Time, which represent the results of his pioneer work on categorization

Plant and Machines and Components, for example, are obviously the Personality facet (in two parts), Materials bears the original name, Physical phenomena relate to these materials The Energy facet appears in two parts Operations and Agent, whilst Space is covered by Geographical divisions

The list of categories, then, shows that there has been need to amplify the five categories postulated by Ranganathan, but that his claim that the five were fundamental to all knowledge, is not invalidated.

This enlargement of the number of categories is common in the sort of scheme we are considering Vickery's Soil Science scheme needed eighteen, which he subsequently condensed into eight.

Kinds of soil
Structure (including parts and layers)
Constituents (parent material, chemicals, organisms)

Properties
Processes
Operations
Laboratory techniques
  and a general facet

Various categories have been suggested as adaptable to many subject fields—note the use of the word 'adaptable' with its implication of action rather than passive acceptance Any list suggested by any worker in the field of classification must be examined for suitability by its intending user and amended to fit *his* needs Vickery's amalgamation of several lists is as follows

Substance, product or organism
Part, organ, structure
Constituent
Property, measure
Object of action, raw material
Action, operation, process, behaviour
Agent, tool
General property, agent, operation
Space
Time

This may be taken as a useful guide

Returning to the English Electric Scheme, the next step was to divide each primary category into its sub-facets and to arrange the relevant terms in each, *e g* MATERIAL is divided according to composition for compound substance and according to composition for elements, metals and alloys Notation was then chosen and allocated Each facet was given a capital letter of the Roman alphabet and each main category comprised then several letters, *e g* Materials was denoted by L to N, Plant and machines by B to E, etc

Subdivision was effected by using lower case letters, as

Dk	Nuclear reactors
Eb	Aircraft

Classifying proceeds in this scheme as in any faceted (or analytico-synthetic) scheme the subject matter of the document is analysed and the component parts set in their appropriate facets The notation symbols are selected from the schedules and are all combined together to give the complete class number. The order of combining them is specified schedule order, not, as in the Music Classification of Coates, in *reverse* schedule order The resulting class numbers appear as in this example

'Test rigs for investigating the dielectric strength of the insulating materials of the stator windings of turbo alternators' Bgb Htws Lb Rzf Zw

This notation and its results in this example show up as commendably brief (for the complex subject matter it represents), simple, structurally plain and easy to handle and file There are admittedly other symbols in use, *e g* full stop, square brackets, hyphen, effects and equals signs, in addition to Arabic numerals, but all these are sparingly utilised The notation is semi-hierarchical in that in some cases it reflects generic structure and often does not

Snags have arisen which may in certain cases be ascribed to the haste with which the scheme was drawn up (the best order of subject elements is not always provided) and some faults are inherent in any faceted classification (notably the scattering of related subjects)

On the first point—order of facets—it should be noted that in this scheme combination order is intended to be schedule order and yet the more complex entities are in the early facets of the alphabetical order. This produces sequences on occasion of general to specific and then specific to general again, *e g*

Diesel engines		De
,, ,,	Bibliographies	De 21
,, ,,	Crankshafts	De Jbt
,, ,,	Crankshafts Bibliographies	De Jbt 21
,, ,,	Crankshafts Vibrations	De Jbt Tj
,, ,,	Vibrations	De Tj
Crankshafts		Jbt
Crankshafts	Vibrations	Jbt Tj
Vibrations		Tj

Similarly G is for Circuits and He is for Transformers Schedule order gives G He for Circuits for transformers, when the reverse is preferable, and, Znk is Digital computers, Tc for Performance Combination in normal schedule order would give Tc Znk Performance Digital computers These must be reversed for efficient subject order

It will be remarked when looking at the schedules of this scheme, how brief a volume it makes This is typical of faceted schemes in general and arises because of their being no attempt to list subjects, to enumerate all subjects or as many as possible of them. A small number of basic terms in the various facets permits combination—synthesis—to form a very large variety of complex subjects This flexibility persists even into each individual facet where the elements may be combined with each other, if required The terms are arranged in the preferred order within the facet and so their synthesis in schedule order gives the right sequence Note that the initial letter for the facet—the facet indicator—may be dropped in such instances

e g	Sbn Neutrons	[Particles]
	Slf Fast	[Energies]
	Srf Fission	[Reactions]
	Sws Spin	[Other phenomena]
Giving ·	Fast neutrons—fission	Sbn lf rf
	Neutron spin	Sbn ws

Further flexibility is obtained by a feature known as the Common Attributes Device. This permits the use of terms from a common schedule relating to shape, size, quantity and motive power The notation of these is lower case letters introduced by 'a' and the appropriate one is chosen and its notation added to any part of any class number, as

Fans	Ds
Centrifugal fans	Ds abv

Note that this device gives rise to a further useful form of flexibility—what Ranganathan would call unscheduled—in that class numbers for new subjects may sometimes be constructed by applying an appropriate common attribute term and its notation, as in

atw = inaccessible, concealed
Kzn = nuts
Kzn atw = blind nuts (*i e* concealed, etc nuts)

6 Cranfield Classification for Aeronautics and Allied Subjects

This scheme was devised by B C Vickery and J E L Farradane of the CRG for one special purpose to provide a faceted classification for the materials being handled at the College of Aeronautics at Cranfield by four different techniques to assess the efficiency of different indexing methods for information retrieval. Besides tests on the faceted classification method, the materials were searched by a traditional hierarchical classification scheme—albeit one with a certain amount of facet structure built into it, *i e* UDC—by a normal dictionary catalogue approach and by a Uniterm coordinate indexing system

The faceted scheme has been described in the CRG's Bulletin No 5, printed in *Journal of documentation*, March 1959 It is another example of the results of dividing the field into a number of categories [Types of aircraft], [Structural parts], [Processes], [Properties], [Operations], [Materials], etc These, plus topics from other relevant subject fields (Management, mathematics, etc) are spread over the capital letters of the alphabet Note that as there are more than 26 categories, some are introduced by a capital letter plus a lower case letter Lower case letters are used to express the terms within each category

To classify a specific subject, symbols representing its component terms are combined together in the order in which they appear in the schedules

An example is

Heat transfer at boundary layer flow past a flat plate This may be re-cast so that the elements occur in the schedule order and the terms translated into the classification schedules or the terms may be allocated first and *then* ordered in the preferred sequence The first alternative is the better method This gives — [Plate] [Flat] [Boundary layer flow] [Heat transfer], and the symbols

Ffe Is Nfl St

—which represents the class number

Besides two species of letter symbol, the scheme also uses numerals (for geographical elements), and the colon, stroke, curved and square brackets and —originally—the hyphen, each with a particular function and each having a distinctive filing order

The notation is used part-hierarchically and part-ordinally, but not retroactively The symbol for Plate above demonstrates this—Ffe The capitals themselves act as facet indicators because they are a different species of symbol

The hyphen (which was later withdrawn from use) has an interesting function that of acting as an intra-facet indicator In other words, there are many occasions when two components from the same facets are to be represented in the class numbers If they both begin with the same capital letter—in the case of this scheme this may often *not* be the case—there is no need to repeat that capital letter but substitute instead a hyphen, as in

Supersonic drag at an aerofoil

where Aerofoil=Cc, Supersonic flow=Nbk, and Drag=Nr The class number can be

Cc Nbk-r

It may be wondered Why bother? The class number is no shorter and is, indeed, more complex But it should be pointed out that the filing order will be changed if the hyphen be replaced by the capital letter N to give. Cc Nbk Nr, which could result in separating special subdivisions of a subject.

The curved brackets are also used to deal with a particular problem It is frequently necessary to qualify a term in the schedules by a term from a different facet and it is sometimes found when fitting the other terms with their symbols that strict schedule order is disturbed To maintain the mechanisation of the order and to attach the qualifying element to the appropriate symbol in the class number, the symbols for the qualifier are enclosed in curved brackets.

7 Occupational Safety and Health Scheme

This scheme was compiled by D J Foskett for the Division of Occupational Safety and Health of the International Labour Office at Geneva It is described and its schedules reproduced as Appendix I of the *Proceedings of the International Study Conference on Classification for Information Retrieval* (1957). Facet analysis in this scheme produces an obvious first category of Industries and Special classes of workers, followed by one for Sources of hazards Then come Industrial diseases, Preventive measures, Organization and Administration, Industrial medicine, Cause of industrial disease, Occupational pathology and, finally, Legislation (arranged by countries). A schedule of common subdivisions and an introductory General section for the whole subject complete the scheme

Capital letters are used as facet indicators and the subdivisions within each facet consist of lower case letters

e g	C	Sources of hazards
	Cg	Industrial equipment and processes
	Ch	Hand-tools and portable power-tools
	Chb	Hand tools
	Chc	Portable power-driven tools
	Che	Electric

It can be seen that this notation is used semi-hierarchically in that it only expresses classification structure at certain levels, and that many subdivisions have the same number of symbols as their genus It would appear that no term in a facet has more than three digits

Considerable use is made of alphabetical listing of terms in some facets, when no other sequence seems advantageous Notation is not to be applied to these but the containing head is used for a class number The specific term is, however, indexed to facilitate reference to it (It might be pointed out that this scheme, as with all other faceted schemes requires an alphabetical index based on Chain Procedure for efficient use)

As in other schemes, also, the preferred helpful order is ensured by stipulating a combination order of the facets In this scheme it is schedule order, giving results such as

Protection of workers in nuclear reactor stations against ionizing radiations
Bh Cqf Ej

where Bh=Nuclear reactors, Cqf=Ionizing radiations (as Hazards), and Ej=Shielding (as Preventive measure)

8 Other Schemes

Other schemes have been formulated by members of the CRG of which the following are examples, study of which reveals family likeness

FARRADANE	Diamond technology
PENDLETON	Insurance
MILLS	Office management
KYLE	Social sciences
VICKERY	Soil science

It is in these schemes and in the writings of the members of the Group that are to be found the latest ideas on subject analysis, subject arrangement, notation developments, and so on Most of this appears in the *Journal of documentation* or *ASLIB proceedings* but *American documentation* should be scanned by the student as well, although most of this periodical is devoted to non-classificatory aspects of information retrieval—systems design, semantic analysis and coding, indexing, etc

Much of the results have been conveniently gathered together within the covers of two or three books Two have been mentioned already the *Proceedings of the International Study Conference on Classification for Information Retrieval* (1957) and Vickery's *Classification and indexing in science* A third book—again by Vickery—appeared in 1960 and is the best, briefest and easiest introduction to all these new ideas now available to the student It is called, simply *Faceted classification* and is a guide to the construction of special schemes

The book reveals some of the ingenuities possible in notation Hierarchical notation would seem to have little in its favour and ordinal notation has permitted the development of means to solve several awkward problems and to allow several liberties to be taken with it without lessening overmuch its simplicity or brevity Facet indicators, for example, may be expressed in the same symbols as the rest of the notation Interpolation of not only new subdivisions and new coordinate topics but even of new facets is possible Form divisions, intercolation devices (to show the introduction of symbols from another—perhaps general—classification) and relational terms (to indicate subject relationship) may all be provided without introducing even one extraneous symbol, if this is desired

Retroactive notation is particularly impressive in that its use enables facet indicators and intra-facet connectors to be eliminated Here, combination order must be the reverse of schedule order The prime facet is thus accommodated towards the end of the available notation symbols The notation is applied to the terms in a purely ordinal fashion One type of character is used One rule must be obeyed For any term, each successive character must be later in the sequence than the proceeding character. For instance, if the alphabet is used for symbols and, say, H—K is used for one facet, the individual class numbers may be, for example, HI, HJ, HK, HKL, HKM, HKMN HZ, IJ, IJK, etc. to KL, KLM KZ, KZZ, etc When observing class numbers such as RTHJLDETU the facet structure is obvious *i e* RT, HJL, DETU—each succeeding facet being signalled by a reversion to an earlier letter of the alphabet

It is significant, incidentally, that the schemes under consideration always use the alphabet, upper or lower case, or both, as a base, because its greater length aids not only brevity but also flexibility—there is simply more room for manoeuvring !

One or two other schemes which arrange material in a systematic order have been introduced in recent years and have achieved a certain amount of fame and use These include that designed primarily for the engineering industry by E G Brisch; the work of the Frenchmen, Cordonnier and Le Grolier which produced a pronounceable class number every time, at the expense of brevity in some measure, the Metallurgical system devised by the Special Libraries Association and the American Society of Metals (important for its use to assess machine literature searching systems), a scheme by N T Ball for patent literature, one for chemical compounds by G Malcolm Dyson and a classification for rubber prepared by Dawson (and now internationally accepted)

9 Classification and Non-Systematic Storage

Classification has been proved to be important even in systems devised to handle material which is not stored necessarily in any systematic order Retrieval of the information in this type of collection may be by manual means (manipulation of entries in catalogues or indexes) or mechanical (via sorting of punched cards, etc) or even electronic (involving punched cards again or photographic materials) In all cases systematic arrangement to some degree is provided for the documents or their records This has two important results the number of documents or records of them searched can be cut down to reasonable limits and generic approaches may be made By this is meant little more than that a search at a general heading will produce all the items covered by the extension of that term without the need to search separately for each individual subdivision or species For example, a reader wanting documents on DOMESTIC ANIMALS should be able to obtain everything on the subject in general and everything on individual animals, if he so desires, without having to search through CATS, DOGS, HORSES, etc. and even then wonder if some heading has been overlooked.

There is not space to describe any of the methods in use at present although they are well worth study. The librarian in a special or reference library would find such investigation repaid the effort, because it is quite possible that he has an indexing need for material which is unsuitable for systematic arrangement Some knowledge, then, ought to be acquired of systems such as Uniterm Coordinate indexing, the Batten superimposable card system, with its developments Peek-a-Boo and the Brisch-Vistem feature cards (a system used by the writer for two indexing jobs), the Random Coding method (Zato coding devised by Calvin Mooers (to whom is owed the origin of the term 'information retrieval') and the Holm-strom Index with its emphasis on flagging devices and cross references

These may seem to be more a matter for cataloguing than for classification but with the systems devised particularly with mechanical or electronic sorting and retrieval in mind, classification plays a large part, as does semantics, the study of word meanings, Vickery's latest book—*On information retrieval systems*—deals with the problems involved and the research done The work of the Americans, Perry, Berry and Kent, has great importance here

91 **A New General Classification**

The work of the Classification Research Group has not been concentrated solely on production of schedules by individual members with subsequent analysis by the corporate body at a jolly get-together In fact, the trend in recent years has been away from consideration of special classifications and towards preparation of a general scheme—as hinted earlier when referring to their examination of things Their discussions are summarised in Minutes and periodically surveyed in Bulletins, which are published in the *Journal of documentation* The next of these will be Bulletin No 6 It will describe the work of the Group during the past three years—since the International Conference at Dorking in 1957 A few of the points covered and arguments advanced are as follows

On the question of building up a general classification from many special schemes, it soon became apparent that there was one great difficulty to be overcome Problems of special classifications and, particularly, of their facet orders, are decided very firmly and fairly easily in accordance with the nature of the subject and the predominant point of view of the users—users who form a pretty closely=knit group These considerations do not obtain when constructing a general scheme This problem was brought home to the Group when they considered a Classification for Social Sciences compiled by Barbara Kyle for Social Sciences Documentation, because here was a scheme intermediate in magnitude between the specific subjects dealt with in earlier work and the general field of knowledge In the area of social science studies, there were many specialists from different academic fields to be catered for. sociology, economics, politics, law, anthropology, amongst others. Probably none had general interests and it was thought likely that few of the less expert users of the scheme and the collection it sought to arrange would have such wide interests. It was found that each special group—required—and deserved—a different arrangement and that one group could be satisfied only at the expense of all the others The only solution was a compromise such that an order was chosen which satisfied no one group 100 per cent but which represented maximum utility to all and was comprehensible to all

This principle could well be applied to the general scheme contemplated and such subject specialist would be obliged to 're-orient himself to a general view in which some of the unities of his subject field are scattered', in the words of the *CRG Bulletin*

The principle chosen to regulate the structure of the scheme might well transcend all the traditional main classes of the known classifications Here Kaiser's 'Concretes' and 'Processes' and Ranganathan's 'Personality', 'Matter', 'Energy', 'Space', and 'Time' were looked at to consider their applicability, as truly 'fundamental categories'

It was noticed that Ranganathan had arranged for the application of his categories only within a normal main class sequence The CRG desired to apply whatever categories were found to be appropriate directly to the whole field of knowledge. The categories selected for investigation were Things and Activities and it is the former which have engaged its attention so far. The members of the Group have accepted an ordering of Things which 'builds in' a concept of different levels—levels of integration The resulting sequence is of "successive forms of order in a scale of complexity and organisation" It is an order in which the simplest, least complex things, in which organisation is quite or almost lacking, come first and those most complex and 'organised' come last It approximates to

Fundamental particles
Nuclei
Atoms
Molecules
Molecular aggregations
Cells
Organisms
Human beings
Human societies
Human intellectual, imaginative and artistic products

A moment's thought shows that the categorization of phenomena as revealed in human knowledge in the ways suggested cuts across all accepted orderings of that knowledge in the great canonical classes—*i e* the main classes of existing schemes This would have its advantages in dealing with those subjects which impertinently cut across the tidily drawn boundaries any way Further thought, however, suggests that many of the accepted main classes academic disciplines like Biology, Medicine, Social science, etc—deal with things at definite, recognizable levels Biology deals with Cells and Organisms up to that level in the order quoted, Medicine deals with Human beings in their aspects as Organisms, Social science deals with Human societies at the level of

Human beings and Human societies. Thus traditional classes may not be so difficult to fit into such a pattern after all

The unconventional nature of a possible future general classification resulting from ideas such as these is startling even alarming to the faint-hearted The prosecution of research of this kind requires courage in its workers. They can guess at the reception their scheme will have when it is beheld by librarians who dare not at this moment raise a finger to throw overboard Dewey's 85 year old collocation of subjects, which they know full well is not only unhelpful but even harmful in that it raises barriers between information and its users (It is also harmful to the prestige of the librarian who must somehow, and always lamely, defend his dependence on an obsolete arrangement). Two riders must be added to this condemnation of the Establishment First, the remarks about obsolete order apply not only to Dewey but to its offspring, UDC and to other schemes of similar venerable age Second, the writer must number himself among the faint-hearted of the present-day, because he, too, is committed to the same hopeless task of attempting to placate, without much success or enthusiasm, subject specialists who find ludicrous or irritating—depending upon his tact and their temper—a scheme which split up what to them is a coherent unit—say, the eye—and places books on it in not less than four places —in the example quoted This example could, of course, be multiplied many times

The Classification Research Group scheme is an urgent need for the years ahead, but it will require much enthusiasm from librarians if they are going to get in into their libraries at all The new generation of librarians who are students today must keep up an interest in the work of the Group and try to understand what its members are doing and will do, because their ideas are going to need some able expositors and forceful friends

The age of machines, of automation, of electronic computers, of microtexts —even microdots !—of tape and telex and closed circuit television with automatic page turners and machine translation—that age is here ! One might almost call it the Non-book age, but never, let us hope, the No-book Age ! But whatever form recorded knowledge takes, there will remain the need for the librarian He must, however, move with the times or lose much of his job and with it his status If he has no efficient way of arranging the knowledge he stores and no up-to-date methods of producing it on demand, he will have no prestige in the eyes of technological-man and his place will be taken by an information scientist, a data-processor or an engineer Reference to current periodicals demonstrates that the scientist and technologist are already impatient to learn how to organise their literature without the aid of the librarian

All this affects catalogues and indexes as much as classification, but, as this paper has tried to show, the classified arrangement of library materials will remain important even with full mechanisation of the means of information retrieval The writer hopes it has shown, too, that librarians, as well as scientists, are aware of this and are, in fact, doing something about it.

CHAPTER D2

Comments on Fundamental Categories in Document Classification

D J FOSKETT

1 Facet Analysis

THE most successful method of making classification systems that is available today is that of facet analysis. It is, thanks to Dr S R Ranganathan, that this powerful tool has been fashioned to the point where it has been used in many specialist systems as well as in the Colon Classification itself. The latest book to expound the method is the excellent *Classification and indexing in science* by Mr B C Vickery, which has been so well received that a second edition is already exhausted. In it, Mr Vickery shows that the idea of dividing knowledge into categories has a long history, going back at least to Aristotle; and in fact, some of the fragments of pre-Socratic philosophers show hints of such an analysis. In the study of library classification, however, the idea (though implicit in earlier general schemes) made slow headway in face of the traditional approach based on logical division into genera and species. Even now, it is sometimes easier to explain facet analysis to subject specialists than to librarians brought up on traditional classification, especially those librarians who have little experience of intensive reference service, where facet analysis is essential to a systematic approach.

11 UDC

It is, of course, well known that in Western Europe the Universal Decimal Classification has long been giving good service in specialist libraries, and in recent years, it too has been improved by the use of facet analysis in some of the expansions in 669 Metallurgy, and in 621.039 Nuclear technology, for example. But everywhere one hears complaints that the UDC is no longer able to meet the needs of the rapidly developing sciences and technologies, and there has thus been a considerable demand for new special schemes. In the USA vast sums of money and prodigious efforts have been poured into research in the use of mechanical sorting machines—to all to little purpose, one fears, judging by the few positive results of the Washington Conference on Scientific Information.

12 SPECIAL SCHEMES

In the UK, the Classification Research Group has been meeting for several years, and has had the pleasure and good fortune of visits from and much correspondence with Dr Ranganathan Its members have made some 20 special schemes between them; of these, probably the best known so far is the one used in the *British Catalogue of music.* One at least of these schemes was made specifically as an expansion of CC, for class F53 Food Technology, one was put forward as a possible expansion for class E Chemistry, and another formed the basis for the classification of Management, published in the *Annals of library science* in 1956 But the CRG did not feel able to adopt CC in its entirety as the basis for a general scheme of classification, though every time a specialist scheme has been presented to the CRG its maker has complained of the lack of a satisfactory general scheme from which marginal subjects might be drawn

2 Fundamental Categories

The dissatisfaction with CC has been due partly to its incomplete state, but also to a feeling of uneasiness over the fundamental categories It is very difficult to persuade some librarians that they are not a mystical interpretation of Nature that cannot be shared with others Those who know him are well aware that, whatever Ranganathan may owe to mysticism, and it is doubtless a great deal, he is in daily life one of the most intensely practical men alive But we are nevertheless forced to admit that he has not devoted enough time to a full explanation of his categories He has expounded some of them, in Chapter 35 of the new *Prolegomena* for example, but even here he has tended to rely on plain statements supported by examples rather than by explanations

21 APPROACH TO FUNDAMENTAL CATEGORIES

It seems to me that the theory of the Fundamental categories ought to be more deeply explored, and though I am not able to offer any particularly profound comments, I suggest that two particular avenues might form at least part of a possible approach They are, firstly, the enunciation of categories so fundamental that they should be applied to the whole of knowledge to produce a series of lengthy lists of isolate terms from which any subject could be precisely specified, and secondly, the enunciation of categories that are likewise fundamental abstractions but which are meant to be applied in turn to a series of conventional "main classes" The second is the method used in CC, and in Chapter 87 of the new *Prolegomena*, Ranganathan works out his "Generalised Facet Formula", which shows by means of symbols how his own five fundamental categories should be applied in the analysis of any subject, no matter how complex. The formula begins with the symbol BC, Basic Class, implying that a primary division of the field of knowledge into such classes already exists.

3 Facet Relationship

One of the main difficulties with the first method is that of finding any consistent relationship between the primary facets produced by dividing the whole of knowledge into a few "primordial schedules" Clearly the facets Space and Time can be constructed in this way, and are, in most of the general classification systems But Energy and Matter, and still more Personality, present considerable problems, because every "thing" which exists as a separate entity, and so might be claimed to be a Personality isolate, exists in fact in a multitude of different relationships with other "things" Thus "steel" is a product to the steelmaker but a material to the tinplate maker, "tinplate" is likewise a product to the tinplate maker but a material to the canmaker In the extension for Class F53 Food Technology, the Raw Material facet was borrowed from the already existing Class J Agriculture, and many other examples could be quoted from CC of isolates, and whole facets, that exist in one set of relationships in one context, and quite a different set in another context

31 TEST METHOD

This question has been argued frequently and at some length in the CRG, but some of us feel that the most straightforward solution is to enumerate each isolate in every context in which it exists in a distinct set of relationships It seems unlikely that one can satisfactorily specify a distinguishing characteristic abstract enough to be capable of a precise meaning according to all possible contexts. On the other hand, it would be well worth while making some tests, as Ranganathan has suggested, with some of the lists of entities that already exist for other purposes examples are the Standard Industrial Classification for industries (several of these are published, in various countries), the lists of commodities produced for Customs and Excise purposes, the various lists of trades and occupations such as those produced for census-taking

32 USE OF FACET-ANALYSIS

This method has never yet been applied to the whole field of knowledge, though Vickery in Appendix C of his book has made an analysis of the isolates occurring in CC Classes B to M and UDC Classes 5 and 6 Facet analysis, however, has been used for single classes or subjects of greatly varying extension CC itself has used various numbers of main classes in its several editions, and the schemes produced by members of the CRG have all covered pragmatically chosen subject fields Other examples of schemes which have made partial use of facets are the ASM-SLA Metallurgical Literature Classification, the expanded UDC Class 669 Metallurgy, the Dawson classification for literature on Rubber and Rubber Technology, and the Kyle Classification for Social Science Literature. The last is perhaps the most systematic attempt to ignore "main classes" and to rely on groupings of entities and operations, but these groups, when arranged in the logical sequence required by the literature, do come very near to the arrangement that would be produced by a primary division into recognised classes such as Cultural Anthropology, Sociology, Politics, Economics In CC, it is interesting to note that, while most classes are subdivided at least into Personality and Energy, a few are divided first of all into Canonical (i e pragmatic) Divisions, Physics and Philosophy are good examples of a practice that seems to be a departure from the normal, and Ranganathan in fact admits this in Section 345 of *Prolegomena*: "(3) Canonical class Any traditional sub-class of a main class, not derived on the basis of definite characteristic(s)", and goes on, in 364, to discuss some of the main classes "calling for canonical classes to be enumerated as the first step, before facet analysis can be applied for further classification. In fact, the main class is more like a bundle holding several canonical classes "

4 Formation of a Main Class

One of the main problems now occupying the attention of the CRG is this very matter of "what is a main class ? Is it possible to make a first division of the field of knowledge by the use of any systematic principle, or must we continue to use the traditional groupings, the "scientific and educational consensus" ? Vickery in his Appendix A describes the various groupings of knowledge that have been suggested through the centuries, and how some of them have been justified What are now spoken of as "traditional" classes have emerged in the course of the development of science, and new classes have been added or inserted from time to time as enough has been discovered of a certain area of knowledge to give it a character sufficiently distinct from other areas to which it is adjacent On the other hand, some classes, such as Mathematics, Astronomy, Medicine, have been isolated for centuries, with more or less the same basic contents, and probably such persistent groupings have a reasonably secure basis

41 VARIATION

We must admit, however, that most of these "traditional" main classes have varied so much, both in sequence and in contents, that they reflect the current dominant philosophy or ideology of the age that produced them more than any actual groupings existing in the real world We ought to be able to find some more scientific basis for selection, especially as a number of studies now exists of the history of classification systems These are given by Vickery in the bibliography at the end of his Appendix A.

42 BASIS OF A MAIN CLASS

Some of the most recent schemes, including the Bibliographic Classification, have based their choice and sequence of main classes on the classification of the sciences drawn up by Auguste Comte. In a paper submitted to the Second International Congress on the Philosophy of Science, held at Zurich in 1954, this sequence was examined in some detail by BM Kedroff, who attacked Comte's "positivism" on philosophical grounds, but nevertheless agreed that a similar sequence would be arrived at by the historical materialist solution by examining the way in which branches of science had emerged as separate disciplines, with "bridge" sciences like physical chemistry and chemical physics growing up between the older, established, classes of chemistry and physics

5 Levels of Integration

The CRG has recently turned its attention to the concept of "levels of integration", of which a brief historical sketch appears in Appendix A of *Classification and indexing in science* It is dealt with more fully by Joseph Needham in his 1937 Herbert Spencer Lecture at Oxford University "Integrative levels a revaluation of the idea of progress" In it Needham shows how evolutionary processes bring about the existence of qualitatively new levels of organisation in material forms, and that "the sharp lines of distinction are only made all the more sharp by the 'mesoforms' which occur between them". This is exactly the point made by Kedroff in his discussion of the "bridge" sciences So it may be said that Nuclear Physics is the science of the elementary particles, Chemistry is the science of atoms, Molecular Physics the science of molecules, Molar Physics of masses, Biology of cells, Anthropology of human beings, Sociology of human beings in social groups It is hoped that the work that the CRG is doing will show whether such a "materialistic" approach is valid for the primary division of the field of knowledge into the "main classes" of a classification scheme

6 Result of Facet Analysis

It is my view that this approach offers a more scientific basis for the selection of the primary groupings than any that has been used before I do not expect the results to show any spectacular advances on previous systems, but to show their superiority by allowing a more efficient application of the method of facet analysis. Only when we have the results of applying this method to groups of phenomena that have an actual physical coherence shall we be able to give a confident answer to the question of how fundamental and how widely applicable are the categories that we can choose to designate the appropriate facets for each primary group, of "main class".

CHAPTER D3

Classification Scheme of the British Catalogue of Music

E J COATES

1 Ranganathan's Contribution to Music

IN no other sphere are European and Asian cultures apparently more alien from one another than in music. The first experience of hearing oriental music is for most Europeans an entrance into a strange and almost incomprehensible world: possibly many Asians are equally bewildered at first contact with Western music. It is therefore, a considerable tribute to the universality of Ranganathan's thinking on classification that his ideas have recently found application on a comparatively large scale in connection with the classification of European music.

2 Faceted Classification

The *British catalogue of music,* which commenced publication in 1957, is a current bibliography of musical scores and books on music published in Great Britain. It is in the form of a classified catalogue, preceded by a combined composer-title-subject index. The classification used, which was compiled specially for the *Catalogue,* consists of a number of facets containing simple terms, the notational equivalents of which are combined in a prescribed order for composite specification. Structurally therefore, the scheme may be considered as an attempt to apply in a limited field those ideas of facet-pattern and consistent combination order in classification, with which Ranganathan has laboured to familiarise us. This is not to say that the scheme resembles the schedule for Music in the Colon Classification; it has more facets, their ordinal relationship is not the same, and the emphasis is naturally on concepts predominant in Western music.

3 Facet-Analysis of Music

The scheme consists of two structurally and notationally parallel schedules for Musical Literature and Music (Scores and Parts) respectively. The facets, in combination order, are as follows:

1 [Composer] 2 [Medium] 3 [Form] 4 [Elements] 5 [Character] 6 [Operation] 7 [Theory] 8 [Place] 9 [Time] 10 [Common sub-divisions]

The first three terms above are self explanatory Facet 4 [Elements] covers such irreducible components of music as Melody, Metre, Harmony, etc Facet 5 [Character] designates types of music by associated extra-musical activity, as Religious music, Military music, Political music, Music associated with work of various kinds Facet 6 Operation covers composing, performing and recording. Facets 7, 8 and 9 also explain themselves, and facet 10 is arranged in two layers approximately corresponding to the anteriorising and posteriorising Common Isolates of the Colon Classification

All of the facets listed above may be required for the specification of Musical Literature In classing Music (Scores and Parts) however, facet 1 [Composer] is omitted. Since a 'composer' is author of his work, composer approach to musical scores and parts is served not by the classification but by the alphabetical index. Therefore, medium, vocal or instrumental, is the primary facet for music (Scores and Parts) Facets 4 and 5 above are used only sparingly for individual scores as they are often too indefinite to be attributed to individual works with any consistency [Place] and [Time] can be used to qualify collections of music, and scores and parts have their own brief set of common subdivisions for distinguishing various types of material of a tutorial nature

31 FURTHER FACETS

2 [Medium] facet is further divided into sub-facets For instrumental music these are:

21 [Instrument] 22 [Number or size of the medium, or number of parts] 23 [Accompanying Instrument] 24 [Original Instrument] if the work is an arrangement

For vocal music, the first two of the above sub-facets are transposed in combination order and the last is omitted altogether, resulting in

21a [Number of voices or parts] (choral, solo, etc) 22a [Particular voice] (male, female, soprano, tenor, etc) 23a [Accompanying instrument]

A note on the contents of some of the facets may be of interest Arrangement in the [Composer] facet for Musical Literature is alphabetical In the [Medium] facet, instruments are arranged by their operational character (*e g* keyboard, bowed, plucked, blown, struck) rather than by the fundamental physical mechanism which produces sound In the [Form] facet the enumeration is deliberately sparse, as many form terms are impossible to define concretely, or to identify in individual pieces of music.

4 Notation

Passing now from structure to notation, we approach an aspect of the scheme in which Dr Ranganathan's influence has not prevailed The symbols used are the signs and the 26 letters of the roman alphabet used in English, giving in effect, a triple alphabetical sequence

(A)-(Z) /A-/Z, A-Z

This notation merely mechanises the order of the terms, it does not, except fortuitously, reflect their hierarchical relationships There are three reasons for this The first two are concerned with brevity of notation Non-expressive notation permits even distribution of terms over base digits, which is a necessary pre-requisite for minimum average length of symbol per term in the classification schedule Because some topics occur in literature more frequently than other, this minimum average length of symbol per term even when attained, does not necessarily lead to minimum length notation for entries actually in the catalogue or bibliography To secure this, the more frequently occurring topics must be allotted shorter notation than others Expressive notation is of course unable to meet either of these two requirements The third consideration steamed from the inability of the compiler of the scheme to foresee, even approximately, the directions likely to be taken in western music during the next few decades, let alone the more distant future Comprehensive facilities for interpolation of new topics (without the introduction of new *species* of digits) were required not only for insertion in existing arrays but also in chain The possible emergence of new facets in the musical field could not be discounted altogether These extremely wide requirements for growth and development are capable of being met only in a non-structure-reflecting notation which permits the insertion of an unforeseen topic in the most appropriate place between two existing topics, irrespective of the particular nature of its relation to either of them It must be admitted that notation cannot be used in this manner without some loss to the predictive autonomy of the classifier as compared with that afforded by the Colon Classification While it is believed that the clear-cut structure of the BCM scheme makes feasible the prediction of the *relative* location of a newcomer between two existing topics, the actual symbol to be used cannot be predicted with certainty Even if mathematical formulae were to be laid down governing the use of notational space between existing topics, their application would still depend on the arbitrary time-order in which new topics for insertion are encountered by the central classifying agency

How far have these two desiderata-notational brevity and interpolability actually been achieved in the *British catalogue of music*? The average symbol length per entry appears to be about four digits for Music and slightly over six digits for Musical Literature As for interpolation, there has not been and cannot be, any difficulty in inserting a new subject, provided that the digit added is later in the alphabet than the first isolate in the facet in which the preceding subject stands Thus, if we wish to interpolate a new instrument between VR-Flute and VS-Recorder, we can add to VR a digit (or digits) later alphabetically than PW which is the symbol for the first stated group of instrument Thus it would be in order to use VRO for the new instrument, but not VRH, which is a composite of VR-Flute and H-Dances, and already means Dances for Flute

5 Combination of Facets

This last example draws attention to another departure from the notational practice of the Colon Classification. The BCM scheme has no facet indicators, digits representing in isolates are simply assembled in reverse schedule order as in the following examples

H	Dances
NS	Quartets
VS	Recorder

Compositive symbol VSNSH-Dances for recorder quartet

De	Cantata
E/M	With orchestra
GH	Tenor voice
K	Solo

Composite symbol KGHE/MDe—Cantata for tenor solo with orchestra The schedules of the scheme have been published in 1960

PART E

CATALOGUING (GENERAL)

CHAPTER E1

Universal Cataloguing Code: Ifla's Initiative

T TYAGANATARAJAN

0 Introduction

FOR some decades past, there has been severe criticism of the existing practices of cataloguing as not being objective and purposeful besides being abnormally expensive. Added to these criticisms, the ever increasing output of library materials in their numerous varieties of forms and languages have further posed new problems. This has, naturally led to the augmenting of the codes with new rules to meet the several *ad hoc* cases. The result has been great proliferation in the cataloguing rules at the expense of consistency and simplicity. As a consequence, rethinking in the ultimate objectives and principles that should govern cataloguing practices, have actively engaged librarians and revision of national codes is being contemplated.[1] It has always been felt that a standard practice of cataloguing throughout the world would greatly facilitate access to and working of international exchange of bibliographic information. Appropriately enough, at this stage, the IFLA has stepped in to bring about some unity in this important aspect of library technique. This paper attempts to review the progress that has been made by IFLA ever since it has taken the initiative.

1 Historical

Ever since Anthony Panizzi laid the real foundation for modern cataloguing by framing his famous ninety one rules in 1841, several cataloguing codes have originated from different parts of the world. In this process of evolution, two schools of cataloguing stood out distinctively, the Anglo-American school conforming to the principle of Corporate authorship and the German school not recognising such a principle. Indeed both these schools exercised considerable influence on the development of cataloguing codes in other parts of the world. This major difference between the two schools practically prevented any international co-operation in cataloguing, although it was agreed on principle that the extension of uniformity in cataloguing beyond the boundaries of nationality and language was desirable. Some measure of success at the international level was, however, achieved when the Anglo-American Code was published in 1908. But unfortunately the same spirit of co-operation did not exist when the United States revised the Anglo-American Code in 1949. One of the important codes, unique in many respects, more international in its outlook and plan, which emanated from India during this period, was the *Classified catalogue code* of Dr S R Ranganathan It initiated a new pattern of thinking in cataloguing and put it on scientific lines

2 Acceptance of Corporate Authorship Principle

With the rapid growth of libraries and phenomenal increase in book production, the existing cataloguing codes could not cope with the new situation and the bulk of the cataloguing rules required to be increased to satisfactorily meet the fresh demands But this was not found adequate for the purpose and the inherent defects of the various codes came up for open discussion In 1941, Dr Osborn attacked the legalistic approach in cataloguing, pointing out that this approach tended to obscure reasons and principles[2] The *American Library Association code*, which was a later revision of the *Anglo-American code* of 1908, came in for very sharp criticism from many quarters The most trenchant and penetrating study of the *American Library Association code* was that of Seymour Lubetzky who exposed the numerous shortcomings of the Code in a lucid but forceful language.[3] This study was unanimously applauded in all parts of the World as greatly stimulating and providing fresh scope for rethinking in cataloguing As a re-result of this study, the American Library Association appointed a special committee for the revision of the Code In 1955, Dr S R Ranganathan brought out his *Heading and canons*[4] which was a most elaborate and scholarly study of comparative cataloguing He ruthlessly examined five important cataloguing codes in the light of well thought out normative principles and canons and indicated the many places where these codes were falling short of requirements Not only did he expose the numerous deficiencies but offered valuable suggestions for their improvements His own *Classified catalogue code* was revised The subsequent years saw the British, the Americans, and the Germans holding national conferences to study the possibilities of the revision of their national codes and many other countries followed suit One very important and far-reaching result of this was the German school's acceptance to recognise the principle of Corporate Authorship

3 Working Group for International Co-operation

It was against this background when most countries were making a reappraisal of traditional cataloguing practices and groping toward universally accepted principles that the IFLA took up the matter at its meeting in Zagreb in 1954 After deep deliberations, it was decided to appoint a Working Group to explore the possibilities of international co-operation in areas where this seemed to be elusive The work assigned to this Group in the first instance was to report on "the principles to be observed in establishing main entries for anonyma and works of corporate authorship "[5] In regard to the composition of this Working Group, it was unfortunate that the Indian School of Cataloguing which has contributed in a substantial measure towards the progress of this technique, was not officially represented

4 International Conference of Cataloguing

The working Group's report[6] while offering solutions for the many problems, concluded that agreement on these points could not be securely based unless wider questions of principles were first decided Without the basic agreements on principles with direct negotiations with the bodies responsible for national codes, the IFLA Working Group's findings could not be very effective Therefore, it was decided in 1957 by the Council of the IFLA to hold a world-wide conference with the aim of seeking agreements on certain basic cataloguing principles With a generous grant from the American Council on Library Resources, the IFLA Working Group organised a Preliminary Meeting at London in July 1959 Fifteen working papers on the various aspects of cataloguing were submitted

5 Dr Ranganathan's Recommendations

In his working paper for the Preliminary Meeting, Dr Ranganathan[7], delineating some of the insuperable difficulties, contended that to make a detailed and complete International Cataloguing Code would be impracticable, if not impossible But he observed that some measure of co-operation could, however, be possible at three different planes, the International, the national and the local He sorted out the problems into those amenable to these three planes respectively As a necessary background, he insisted, the whole structure of cataloguing at all levels should be firmly based on certain normative principles and canons He finally enumerated the various issues putting them into groups at nine different levels as follows [7]

1 Main entry and its sources including types of catalogues ,
2 Heading of main entry ,
3 Choice of elements for heading ,
4 Rendering of entry element ;
5 Title section ,
6 Note section of main entry ,
7 Specific added entry ,
8 Subject heading , and
9 Cross reference index entry

6 Agenda for International Conference

The conclusions regarding the matters for consideration by the International Cataloguing Conference were [8]

1 The aim should be to reach agreement on basic principles governing the choice and form of entry in the alphabetical catalogue of authors and titles,

2 The considerations of these principles should be based on the following assumptions

A That the Catalogue must have two purposes,

(i) To locate a particular publication by its author's name or its title as given in the publication,

(ii) To bring together entries for all editions and translations of one work and all works of one author.

B That the catalogue will consist of a main entry for each item, with added entries and references where necessary

3 Function of main entry in relation to assumption A, (i) and (ii)
4 Choice of main entry,
5 Rendering of personal, corporate authors,
6 Title entries, and
7 Form headings.

In addition to these, it was also decided to project various special studies as a background for the work of the Conference to be held at Paris in 1961

7 Dr Ranganathan's Recommendations vs Ifla Agenda

It is evident from the above that the IFLA has proposed to find agreements only in certain limited areas as against Dr Ranganathan's suggestions It appears that even some essential matters have been overlooked To cite only a few

1 There is no mention in the report of any normative principles on which the whole structure of cataloguing should be based,

2 The alphabetical catalogue of authors and titles alone is taken for reaching on principles governing the choice and form of entries. But as Mr Chaplin puts it in one of his articles, "It is doubtful whether it should assume, as has so often been done, that there is one type of catalogue par excellence to which a universal code should apply—the author-title catalogue"[9]

3 The sources of main entry has not figured at all in the report This involves a basic principle and can never be set aside. If the sources of the main entry are not limited to the title-pages several questions spring forth How far the main entries may be based on the information found from outside the work ? What standard reference sources are to be consulted when information is sought from outside the work ? What is to be done when there is no authoritative reference work available for finding answer to a particular bibliographical question ? How is it permissible to allow discretion in the selection of heading from among various alternatives ?

In this connection, the permanent solution to this vexed problem offered by Dr Ranganathan namely, to standardise the title-page, needs very careful consideration.

4 The subject approach to the catalogue is entirely overlooked

8 **Conclusion**

Not withstanding these, IFLA's initiative to convene an International Conference is a step in the right direction and it deserves to be congratulated It is hoped that in the ensuing conference at Paris in 1961, striking results will be achieved which will facilitate exchange of ideas among countries, ultimately leading to a better understanding among nations

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CHAPTER E2

Cataloguers' Puzzle : Corporate Authorship

M L KAUL

0 Corporate Authorship

As a cataloguer for the last eight years, the problem of corporate authorship is always a perplexing one, for the profession. Owing to a panorama of *ALA rules*, many of which are duplicate, parallel and redundant based on unnecessary and irrelevant distinctions, difficulties arise in deciding the author of a work. Ever since I took to the study of library science, it has been my dream to see whether this puzzle could be solved. Incidently, last year while studying Master's Degree at the University of Delhi, I got an opportunity to study in detail not only the *Classified catalogue code* of Dr S R Ranganathan, but also the criticism of *ALA rules* made by Mr Seymour Lubetzky, then Consultant on Bibliographic and Cataloguing Policy, Library of Congress. During my study tour in the United States, I was anxious to meet Mr Lubetzky who after Dr Ranganathan ventured to break the ice. Fortunately, I had a brief discussion for about two hours with him at the University of California (Los Angelos). We could not arrive at some conclusion but the meeting was very interesting and fruitful.

In this article I do not want to give the historical background showing the difficulties faced from time to time not by the cataloguers only but by the framers of cataloguing codes *viz*, Charles Ammi Cutter, Hanson, Ranganathan and Lubetzky. Here I try to examine and evaluate the rules of the unfinished draft of the *Code of cataloguing rules—Author and titles* written by Mr Lubetzkey and published by ALA in 1960.

1 Definition

The term is defined by Dr Ranganathan in CCC, (=*Classified catalogue code*) Ed 4 as under:

"A number of persons taken collectively—usually as united, or organised, or coming together informally, in a common cause or for common action such as governmental business, or commercial or industrial or service or political or any other business, or for deliberation, or for collective expression of opinion or statement."

CCR (=*Code of cataloguing rules*) does not try to give any definition Such omission makes the task of a cataloguer rather difficult and vague

The abandonment of artificial distinction between societies and institutions created by ALA which was very difficult to establish without considerable research, is welcome

11 FALLACY

The words "implicitly bear the authority of the issuing body" in rule 22 of CCR are vague It would be more clear if in the beginning the definition of corporate author given in CCC rule 1232, would have been mentioned Rule 23 of CCR runs as under

Work of division of corporate body. (a) A work issued as an act, communication of product of the activity of a division or unit of a division or unit of a corporate body is entered under the name of the division or unit "

A unit or division used by CCR requires some explanation Moreover, the various types of ORGANS should have been given on the lines mentioned in the following rule of CCC

1221 Organ of a corporate body Non-autonomous part of a corporate body formed by

1. The constitution of the present body,
2. A legislative, executive or administrative measure, for administrative or deliberative work for an indefinite period, within the field of function of the parent body, or
3. A legislative, or executive, or administrative measure for a specific piece of work for a specified duration, within the field of function of the parent body

2 Individualization

The rule 24 of CCR under the heading "Work of group organised or sponsored by corporate body" is not comprehensive No prescription has been laid down so as to individualize a conference *viz*, name(s) of the place(s) as in CCC Rule 252 Moreover, what about a conference which is not held periodically and a conference which is an organ of another corporate body ? Rule 26 of CCR under the heading work of individual issued by corporate body is similar to CCC Rule 1421-14232 ALA had no clear cut prescription even in Rule 71

3 Identification

RULE 27 OF CCR RUNS AS UNDER

(a) *Identification* A corporate body is represented in the catalogue under the name by which it is identified in the works—at the head of the title, in the mprint, or in any other position where it is formally used—in the language and form by it, with references from the other forms of name under which the corporate body might be sought:

This rule is welcome as it satisfies the Canon of Ascertainability and also replaces ALA Rules 103 to 114. Moreover, it is for the first time that the controversy of "latest and earliest name" has altogether been abandoned. CCR Rule 27(b) 1-5 also is similar to the prescription of CCC Rules 2412, 413 and 2414

Rule 28 (a) is redundant because the Canon of Ascertainability would direct he cataloguer to make the entry under the abbreviated form given on the itle page.

Rule 28 (b) again violates the Canon of Ascertainability

Rule 28 (c) This rule is based on CCC Rules 2415.

4 Variant Names and Change of Name

Rule 29 (a) If the name of a corporate body appears in its works in variant forms, the official form of the name is used in the entry, unless another form s predominantly used or the body as come to be known and is identified in reference sources by another form of the name

The words "official form" is difficult to find It would be in the fitness of things if the words "Uniformised Name" used in CCC are used

5 Corporate Name in Several Languages

Rule 30 (a), (b) and (c) could easily be changed on the lines of the rule 2411 of CCC with certain modifications, because it is difficult to determine the "official form" of the name

6 Personal Name as Corporate Name

Rule 31 prescribes that a business firm consisting solely of a personal name should be entered like a personal name, followed by the qualification *Firm* What about those personal names which carry an initial term denoting a title of honour or distinction *viz* judge, Bishop, Hon'ble, Sir etc ? Specific directions for omitting these initial terms should have been given

7 Name of Affiliated or Subordinate Body

Rule 33 (a) is welcome as it replaces many ALA rules especially rules 99 to 102 The greatest contribution CCR has made is reversing the ALA prescription of making place name as entry element for institution heading which had vitiated the code. By this prescription, CCR satisfies the Canon of Prepotence

8 Conclusion

It was late in 1937 that Dr S R Ranganathan made the first comparative study of the various catalogue codes. The *Headings and canons* was a second step in this direction after the scientific method to cataloguing was applied and finally the problems for compilation of an International Catalogue Code were touched by him. It is obvious that the improvements suggested by Mr Lubetzky are broadly based on the inconsistencies pointed out by Dr Ranganathan long ago.

CHAPTER E3

Corporate Author Entry as regards the German Federal Republic

James B Childs

0 **Official Publications**

Since the Summer of 1945, there have been many changes in national governments as well as the continuing appearance of new national jurisdictions. Each of these with links in the past and projections into the future, represent organization for national survival. The complexity of each government without ordinarily any standardization of administrative terms is seldom likely to be understood fully even by those closely connected with its operations. Constitutional, statutory and administrative requirements as regards official publications seldom seem to provide for any general or systematic control or scheme for deposit in a library or series of libraries within the jurisdiction. For that matter, such provisions generally seem to represent the thought of a disappearing area that aside from historical, scientific, statistical, legal and general cultural work, government publications are intended mainly for the use of legislators, government officials and those cooperating with them or affected by their actions. Under such conceptions, official publications would be normally most represented in legislative and administrative libraries and in archives, and would afford a relatively minor problem for collection and treatment in other libraries, particularly for those official publications not entered under individual authors or editors or not being distinctive serial titles.

01 Official Publications in German Libraries

Heinz Kaspers in his work *Die Abgabe amtlicher Drucksachem an die offentlichen bibliotheken* (Koln, 1954) has so far as possible made a survey of all provisions pertinent, both national and Lander, coming to the conclusions that there has been so little systematic provisions for the deposit of official publications in German libraries that very serious consideration should be given by the Federal Government to the establishment of some system of controls to this matter as well as attention by the Lander governments to the same sort of problem. The presentation and other considerations led to the Verein Deutscher Bibliothekare setting up in May, 1955, a committee for Amtsdrucksachen to consider the possibility of making recommendations for appropriate action As a result, an Erlass of May 12, 1958, published in the Gemeinsames Ministerialblatt, vol 9, no 12, authorizes and directs each agency of the Federal government to furnish directly and currently a copy of each of its official publications to the following libraries.

Deutsche Bibliothek, Frankfurt am Main,
Westdeutsche Bibliothek, Marburg, and
Bibliothek des Deutschen Bundestages, Bonn

011 COMPLICATIONS EXPLAINED

In the libraries of the German Federal Republic, the not very favourable situation as regards the collecting and making available German official publications seems to have been about as stated by Karl Becker in the article "Amtsdrucksachenwesen in der Bundesrepublik Deutschland" printed in *Nachrichten fur wissenschaftlichen Bibliotheken*, February, 1952, in the following terms

"Leider ist aber das deutsche Bibliothekswesen in der Pflege dieser Publikationen stets hinter seinen Leistungen auf anderen Gebieten zuruckgeblieben " Again, Archivist Fritz Facius, of the Bundesarchiv, who in 1939 published a bibliography of the complicated official publications of the Thuringian States from the 18th century through 1922 in the *Zeitschrift des Vereins Fur Thuringische Geschichte und Altertumskunde*, trenchantly refers to German official publications in an article in Der Archivar, July, 1955, as "Ein Grenzgebiet Zwischen Archiven and Bibliotheken"—a characterization doubtless applying equally well to those of many other countries

1 Prussian Instructions

In keeping with the long prevailing concept, the Prussian Cataloguing Instructions[1], promulgated May 10, 1899, and still apparently overwhelmingly dominating the cataloguing treatment in German libraries, noticeably makes no provision for the entry of official publications under jurisdiction with agency or form subdivision, and simply provides for treatment in the following terms (p 75)

"Gesetze, Patente, Abschiede, Bullen, Hirtenbriefe und andere amtliche Veroffentlichungen werden under den Urheber [personal author gestellt wenn er auf dem Titelblatt genannt ist " It would seem quite likely that the stress thus rather oddly placed in the Prussian state universities In fact, the law faculties seemed, and seem even somewhat today, concerned not only with law but with all the social sciences, and thus the problem of corporate author entry was neatly and not very effectively pigeonholed with the treatment of laws and law collections Stress even placed on official publications by Wilhelm Fuchs in *Juristische Bucherkunde, Geschichte und System der juristischen Fachbibliographie* (5 Aufl, 1 Teil, Gottingen, Schonhutte, 1953), especially p 295-307, under the introductory characterization as "eine Gattung von Literatur, die fur die wissenschaftliche Arbeit des Juristen viel ausserst wichtiges, zum grossen Teil unentbehrliches Material bietet", would seem to confirm the diagnosis.

Georg Maas in the early 1900's brought this unfavourable situation and the need for doing something about it to the attention of the Verein Deutscher Bibliothekare Many years later in Berlin on one occasion, Maas told me that then some of the more conservative members of the VDB had taken the view of this being a matter of no great importance or concern for German libraries

2 German National Bibliography

In 1927, the late George Schwidetzky, then on the staff of the Deutsche Bucherei at Leipzig, stimulated by my *Account of government document bibliography in the United States and elsewhere,* which had appeared some time previously, published his volume *Amtsdrucksachenkunde* as Beiheft 59 of the *Zentralblatt fur Bibliothekswesen* In reference to the official publications treatment in the Prussian Instructions, Schwidetzky characterized it rather bluntly on page 64 as "nicht nur falsch, sie ist auch unzweckmassig " Soon after, the Preussische Staatsbibliothek, taking into account the special needs for arrangement under agency despite the lack of provision in the Instructions, prepared and printed several volumes of its current acquisitions of German official publications, arranged under jurisdiction and agency for the years 1927 and 1929 With 1928, the Deutsche Bucherei at Leipzig as the centre for German national bibliography began with the support and authorisation of the Reichsministerium des Innern the publication of a monthly catalog of German official publications, arranged by jurisdiction and agency, under the title *Monatliches Verzeichnis der reichsdeutschen amtlichen Druckschriften* and continued this until the war situation forced the suspension with a combined issue for March-June, 1944 Although the current Deutsche *Nationalbibliographie* still follows in the pattern of the Prussian Instructions, the Deutsche Bucherei with 1957 began the inclusion of official agencies in the indexes in recognition of the importance of locating official publication by issuing agency

3 Corporate Author Entries

An unpublished study at Cologne in 1954 of corporate entry in several German libraries by Gregor Peters under the title *Korporative Verfasserschaft als Katalogisierungsproblem* is evidence of a stirring of interest in this matter. Further, a course for "*Behordenbibliothekare*" at the Bibliothekar-Lehrinstitut at Cologne has brought into consideration corporate author entries.

31 Non-English Speaking Countries

The basic recognition of the validity and utility of the section of the Anglo-American catalogue rules providing for the entry of official publications under jurisdiction with subdivision, while apparently not too widely accepted as yet in the libraries of the Federal Republic, has found some recognition in certain national bibliographies of non-English speaking countries as well as in the Vatican Library catalog rules For instance in Jugoslavia, the Bibliografski Institut FNRJ at Belgrade in its *Bibliografija Jugoslavije, knjige, brosure i muzikalije*, uses regularly and normally corporate entries as follows

Jugoslavija	*Drzavni Sekretarijat za Inostrane Poslove,*
Jugoslavija	*Savezna Narodna Skupstina,*
Srbija.	*Hidrometeoroski Zavod.*

In Italy, the new *Bibliografia nazionale italiana*, published by the Biblioteca Nazionale Centrale at Florence, beginning in 1958 in continuation of the *Bollettino delle pubblicazioni italiane ricevute per diritto di stampa* is using the entry of the agency without the name of the country, since presumably most such entries would be under Italy, in the following form·

Corte dei Conti,
Istituto Centrale di Statistica,
Ministero dell'Industria e Commercio

Thus is shown a widening acceptance of the practicability of corporate entry in non-English speaking countries.

32 Author Entry for Government Publications

In recognition of the fact that changes are constantly taking place in government organization and function and that some effort towards clarification in the application of the basic rules might be helpful in explaining and standardizing the treatment, I prepared a paper *Author entry for government publications* presented before a section meeting of the 1934 Conference of the American Library Association, subsequently reprinted separately, and last printed separately for the Library of Congress with some slight emendations in 1941.

4 ALA Rules

The general rules on the application of which we will dwell rather than on the detailed specifications appears in its latest version in the *A L A cataloging rules for author and title entries*, second edition (Chicago, American Library Association, 1949)[2] on pages 126-127, substantially as follows.

"Enter under countries or nations, states, official publications issued by them or by their authority. Enter publications emanating from the various agencies under the names of the agencies (legislative bodies, courts, executive departments, bureaus, etc) as subheadings (under country or other jurisdiction) in the latest form in the vernacular .. Certain classes of institutions and other bodies created, maintained, controlled, or owned by governments, but not direct agencies of government are, however, to be treated according to the rules governing these bodies as authors " The names of countries, self-governing dominions, colonies, and protectorates are to be used in the conventional English form [3]

41 Comment in Unesco Publication

Even the UNESCO *Survey of current bibliographies of national official publications,* edited by Jean Meyriat and published in Paris at the beginning of 1958 as *UNESCO bibliographical handbooks,* no 7, contains the following comment on page 47, looking towards standardizing of the entry in the cataloguing of official publications

"It would seem desirable to generalize the solution already adopted by many countries, according to which the State is to be considered the author of all national official publications Its name is thus the heading of the bibliographical notices of all its publications All governments would do well to announce their publications in this form "

42 German Federal Republic Official Publication

The preparation of a survey entitled *German Federal Republic official publications, 1949-1957, with inclusion of preceding zonal official publications* (Washington, D C, Library of Congress, 1958 *i e* 1959, 2 vol, p 887)[4] afforded among other things some opportunity for me to make certain observations on the application of corporate author entry under a period of very considerable change with the development of a new national government and its adjustment to a rapidly shifting array of problems such as may be presented in some form or other in the developing national governments elsewhere

5 **Structure of German Government**

After the collapse of the Reich government in the spring of 1945, and the ensuing establishment of military governments in each of the three western zones, there was in addition to the immediate setting up of Lander governments a trend towards the development in each zone of German zonal services and institutions based usually on the pattern of former Reich services. In the aggregate, these were most numerous in the British Zone, less so in the United States Zone, and still less so in the French Zone The economic fusion of the zonal services of the British and United States Zones in June, 1947, was accomplished under the name of Bizonal Economic Administration (Vereinigtes Wirtschaftsgebiet) with headquarters at Frankfurt and Main A Parliamentary Council (Parlamentarischer Rat) to prepare a constitution for a united Germany in the three western zones was called by the Minister-Presidents of the Lander to convene at Bonn on September 1, 1948, under the agreement of the military governors as expressed on behalf of their governments in July, 1948 A trizonal fusion agreement was announced on April 8, 1949, and an Occupation Statute proclaimed The constitution of the German Federal Republic (Bundesrepublik Deutschland) was adopted on May 23, 1949, and appeared in the first number of the *Bundesgesetzblatt* as of that date The Federal Parliament (Bundestag) began its sessions on September 7, 1949 The Federal President was elected by the Federal Convention (Bundesversammlung) on September 12 The Federal Chancellor was elected by the Bundestag on September 15, and the Bundesregierung took office on September 20, marking the beginning of the transfer of the zonal services to the Federal Government

51 Author Entry for Zonal Agencies

For the zonal agencies, the author entry can be established in the following form, based on the analogy of certain entries in the first World War period and elsewhere

Germany (*Territory under Allied Occupation,* 1945-1955 *British Zone*) *Statistisches Amt*

Germany (*Territory under Allied Occupation,* 1945-1955 *British Zone*) *Meteorologischer Dienst*

Germany (*Territory under Allied Occupation,* 1945-1955 *United States Zone*) *Landerrat*

Germany (*Territory under Allied Occupation,* 1945-1955 *Vereinigtes Wirtschaftesgebiet*) *Wirtschaftsrat*

52 West Germany and Official Publication

On May 5, 1955, the Convention on Relations between the Three Powers (France, Great Britain and the United States) became effective, the occupation Statute was revoked, and the Allied Occupation ceased Information as to the authority for the organization and the names of agencies during the zonal period can be acquired mainly by the painstaking and tedious search of official gazettes and other publications of the period. In recognition of this great difficulty of acquiring adequate information in regard to agency, though without regard to official publications, the Bundesarchiv at Coblenz published in 1956, the first part of *Westdeutschland, 1945-1950, Der Aufbau von Verfassungs-und Verwaltungseinrichtungen uber den Landern der drei westlichen Besatzungszonen,* prepared by Walter Vogel This might be characterized as a somewhat glorified official handbook

53 DISTINCTION IN AUTHOR ENTRIES

For the Federal Republic of Germany (Bundesrepublik Deutschland) the following author entry distinguishes it from the former Germany (Deutsches Reich), from the zonal governments, and from the Deutsche Demokratische Republik, which was constituted in the Soviet Zone on October 7, 1949:

Germany (*Federal Republic,* 1949-)

Immediately a problem presents itself with the Parlamentarischer Tsy, which in 1948-49 drafted the federal constitution From one point of view, it probably could be considered for entry as follows, since the federal jurisdiction did not exist at the time of its convening

Parlamentarischer Rat, 1948-1949

To consider it from analogy with a similar entry under the United States, it being closely linked with and substantially an integral part of the jurisdiction as created, the entry could with equal claim be as follows

Germany *(Federal Republic,* 1949- *) Parlamentarischer Rat.*

6 Federal Constitution

While the Federal Constitution provides specifically for the Bundesprasident, the Bundestag and the Bundesrat, the designation of the ministries seems to be determined ordinarily by the Bundesregierung at the time of the initial presentation of the ministers to the Bundestag, following in the main the pattern of the Reich ministries In this connection, it should be noted that many previous enactments and statutory orders including those dealing with the organization of the government services from 1867 to the time of the Federal Republic have validity in all or in part under the Federal Republic, that since 1955 a careful scrutiny of these has been and is being undertaken to determine and set down what is still valid, and that the valid portions are being published systematically as part III of the *Bundesgesetzblatt,* beginning in 1958.

61 ENTRIES OF MINISTRIES

The following represent entries for ministries typifying more the traditional plan

Germany (*Federal Republic,* 1949-) *Auswartiges Amt*
———— *Bundesministerium der Finanzen*
———— *Bundesministerium der Justiz*
———— *Bundesministerium des Innern*
———— *Bundesministerium fur Arbeit und Sozialordnung*
———— *Bundesministerium fur Ernahrung, Land—und Forstwirtschaft*
———— *Bundesministerium fur das post-und Fermeldewesen*
———— *Bundesministerium fur Verkehr*
———— *Bundesministerium fur Verteidigung*
———— *Bundesministerium fur Wirtschaft*

The above represent the forms of the names as presented to the Bundestag and as made official in the enactment of the Budget (Bundeshaushaltsplan) Even so, there is a tendency to lapse into earlier or shorter or unofficial forms of name such as the following, which are found at times,

Bundesarbeitsministerium,
Bundesfinanzministerium,
Bundesjustizministerium,
Bundesverkehrsministerium,
Bundeswirtschaftsministerium,

For the next to the last, it had actually the name Bundesverkehrsministerium until June 20, 1950 The Bundesministerium fur Arveit became the Bundesministerium fur Arbit und Sozialordnung with the presentation of the new government in October, 1957, in view of changing functions

62 NEW FUNCTIONS AND TEMPORARY MINISTRIES

The following represent a new pattern of functions as well as temporary ministries

Germany (*Federal Republic,* 1949-) *Bundesministerium der Lander*
———— *Bundesministerium fur Atomenergie und Wasserwirtschaft*
———— (*Federal Republic,* 1949-) *Bundesministerium fur Familien-und Jugendfragen*
———— *Bundesministerium fur gesamtdeutsche Fragen*
———— *Bundesministerium fur Vertriebene, Eluchtlinge und Kriegsgeschadigte*
———— *Bundesministerium fur wirtschaftliche Zusammenwirkung*
———— *Bundesministerium fur wirtschaftlichen Besitz des Bundes*
———— *Bundesministerium fur Wohnungsbau.*

While two of the above (Gesamtdeutsche Fragen and Wohnungsbau) have had no change in name, the others have had changes in name and function One instance may show some of the forces at work The Bundesministerium fur wirtschaftliche Zusammenwirkung was set up September 21, 1949, as the Bundesministerium fur den Marshallplan, and had the name changed on October 20, 1953, to the later form with presentation of the minister to the Bundestag On October 27, 1957, it was dissolved, part going to the new Bundesministerium fur Wirtschaftlichen Besitz des Bundes, which is controlling the federal participation in enterprises and handling any liquidation, and part to be Bundesministerium fur Wirtschaft

63 Subordinate and Attached Agencies

Below the rank of ministry and subordinated to a ministry, attached to one for budgetary reasons, or supervised by various ministries, come at least one hundred fifty agencies, presenting different problems as to author entry and representing frequently as do some of the ministries a continuation, even in part, of former Reich agencies and instrumentalities. For many of the subordinate, attached, or supervised agencies such as the following, there is no question as to their belonging under the jurisdiction as direct agencies of the government

Germany (Federal Republic, 1949-) *Bundesarbeitsgericht*
——— *Bundesarchiv*
——— *Bundesgesundheitsamt*
——— Bundesstelle fur *Aussenhandelsinformation.*
——— *Bundeszentrale fur Heimatdienst*
——— *Patentamt*
——— *Seeverkehrsbeirat*
——— *Statistisches Bundesamt*
——— *Wasser- und Schiffahrtsdirektion*
——— *Wetterdienst*

Amt Dienst, Stelle, and Beirat are distinguishing terms that occur fairly frequently, characterizing ordinarily direct agencies, even though the function and meaning may vary slightly from instance to instance.

64 Entry for Federal Bureau

With the term Anstalt, which can often be rendered literally and generally as Institution, particularly Institution with a physical plant, difficulties are struck in the use of the term in federal legislation in a specific meaning for bureau with a physical plant attached to it Thus, the Physikalisch-Technische Bundesanstalt at Braunschweig is the Federal Bureau of Standards, being actually a continuation of the former Physikalisch-Technische Reichsanstalt at Berlin In close relationship to this, is the Bundesanstalt fur Materialprufung at Berlin, the federal agency for determining and maintaining mechanical and chemical standards, which is an outgrowth of the former Staatliches Materialprufungsamt and the former Chemisch-Technische Reichsanstalt Likewise, the Bundesanstalt fur Gewasserkunde at Coblenz is the Federal Hydrological Bureau, the Bundesanstalt fur Tabaksforschung at Forchheim is the Federal Tobacco Research Bureau, and the Bundesforschungsanstalt fur Fischerei at Hamburg is the Federal Research Bureau for Fisheries Even the Biologische Bundesanstalt fur Land-und Forstwirtschaft at Braunschweig, with the former Reichsanstalt at Berlin as a branch, which without too close scrutiny and understanding could be entered under place as an institution, seems upon closer examination to be actually nothing more than the Federal Bureau for Plant Disease Control and Research Thus, this type of Bundesanstalt here treated from the governmental and administrative point of view as Federal Bureau rather than as Federal Institution could be entered in the following form with reference from the place of principal location, as follows

> Germany (*Federal Republic*, 1949-   ) *Bundesanstalt fur Gewasserkunde* With references from Bielefeld, where it originally had its headquarters, and from Coblenz, where its headquarters are at present

65 OTHER ENTRIES

Further, the term Bundesanstalt has been applied to certain federal instrumentalities deriving their funds from various types of sources and charges and not solely from annual recurring appropriations in the federal budget and usually constituted as an Anstalt des offentlichen Rechts or as a Korperschaft des offentlichen Rechts, and thus being entered directly under their own names One very noticeable instance is the Bundesanstalt fur Arbeitsvermittlung and Arbeitslosenversicherung at Nuremberg Another instance is the Versorgungsanstalt des Bundes und der Lander at Karlsruhe, functioning to provide supplementary insurance for workers of the national government and of the states Still another instance is the Bundesanstalt fur den Guterfernverkehr, a truck transport office at Cologne Still further, due to the peculiar governmental situation existing at the time, the Forschungsanstalt fur Landwirtschaft at Braunschweig-Volkenrode was consitituted by action of the Bizonal Wirtschaftsrat dated December 18, 1947, as the general national agricultural research service, organized as an Anstalt des offentlichen Rechts under the Land Niedersachsen The current expenses seem to be defrayed entirely by the Federal Government It is apparently referred to at times as the Bundesforschungsanstalt fur Landwirtschaft, and is regarded as the Federal Agricultural Research Service, and could be entered under its own name as an Anstalt des offentlichen Rechts, or under place as an agricultural experiment station, or under the Federal Government when regarded as a direct federal service, as it seems to be so regarded in the federal budget.

66 Institute vs Bureau

The term Institut as applied to bureaus of the Federal Government furnishes another instance of vague definition and application as an administrative expression, possibly representing nothing more than that the bureau is staffed with scientifically-trained or especially-trained personnel. Instances of this type of designation are the Institut fur Angewandte Geodasie, the Federal Land Survey Board at Frankfurt am Main, the Institut fur Raumordnung, the Federal Board for Spatial Research and Planning at Bonn, and the Deutsches Hydrographisches Institut, the Federal Hydrographic Office at Hamburg In 1945, the DHI was established under the authority of the Allied Control Council as an All-German service, financed initially by the British Zone, later by the Bizonal Government, and from November, 1952 by the Federal Government Now, it is one of the Oberbehorden under the Bundesministerium fur Verkehr, is the direct federal agency for the safety of German Shipping, with research functions only incidental to this, and thus can be treated as a direct entry under the Federal Republic as follows

Germany (*Federal Republic*, 1949-) *Deutsches Hydrographisches Institut*

In contrast, the Deutsches Archaologisches Institut and the Deutsches Historisches Institut, although financed by the Federal Government, are research organizations of long standing, and not to be regarded as direct agencies or bureaus and thus would be entered directly under their own names

Even the two "Sondervermogen" of the Federal Government, Deutsche Bundespost and the Deutsche Bundesbahn, are essentially federal agencies under their special statutes, and are to be treated as such for purposes of author entry

67 Variations

In addition to the device of "Anstalt des Offentlichen Rechts," a few other agencies such as the Land-und Hauswirtschaft-licher Auswertungs-und Informationsdienst have been organized as an "eingetragener Verein" (e V) on account of financing problems, and in common with such other organizations so registered are normally entered directly under their own names Another variation is the "bundesunmittelbare juristische Person des offentlichen Rechts" as represented by the Deutsche Bundesbank (originally Bank Deutscher Lander) at Frankfurt am Main, which in common with other banks is to be entered directly under its own name

7 **A Ready Key**

Faced with the complications of an administrative or governmental system that seems partially to defy detailed treatment and yet that upon analysis seems to yield to the Anglo-American rules for corporate author entry in a library catalogue or bibliography, the need is for finding a ready key to the situation The official *Handbuch fur die Bundesrepublik Deutschland*, edited by the Bundesministerium des Innern and published by Carl Heymanns Verlag KG of Berlin and Cologne, appeared only for 1953 and 1954, and has been merged with the long-established *Taschenbuch fur Verwaltungsbeamte*, and published annually by Heymann under the title *Die Bundesrepublik*, which although probably quite as full in the information presented as the Handbuch can hardly be said to be an official publication Yet, there is an official source, the bulky annual budget (*Bundeshaushaltsplan fur das Rechnungsjahr*), prepared in the Bundesministerium der Finanzen, which with all its intricacies and technicalities usually contains under each agency separately treated for appropriations a summary statement of basic laws and orders (with changes from year to year) governing organization, operation and functioning Even the budget does not attempt to define any administrative terms of questionable or vague meaning

8 Problem of Official Publications

As in the German Federal Republic, precise understanding of the instrumentalities of the new, changed and changing governments and of their official publications tends to offer an increasing challenge to the intelligence and ingenuity of librarians as well as of government officials and other users of the materials From the above statement, the main outlines of the Anglo-American catalogue rules so far as pertinent do seem to present a practical and modern approach worthy of wider consideration and application so far as tempered with an understanding of the developing governmental organization and functions

BIBLIOGRAPHY

1 *Instruktionen fur die alphabetischen Kataloge der preussischen Bibliotheken and fur den preussischen Gesamtkatalog* Berlin, A Ascher & Co, 1899

2 At this point, it may be well to call attention to the following statement in the *Annual report of the Librarian of Congress for the fiscal year ending June 30, 1957*, p 14

> "In September, 1956, Seymour Lubetzky, Specialist in Bibliographic and Cataloging Policy, began drafting a revised code of cataloging rules for the Catalog Code Revision Committee of the ALA's Cataloging and Classification Section This project is sponsored jointly by the Library and the ALA The final result will be the issue of a third edition of the ALA *Cataloging rules for author and title entries* which will also incorporate the Library's Rules for Descriptive Cataloging "

3 For cataloging codes in countries using languages other than English, a similar practice as regards the name of country or jurisdiction would probably mean use in the conventional form in the language of the code References can be made, and should be made, from alternate forms to the forms used

4 Issued as an operational document for limited distribution

CHAPTER E4

Government and Official Publications in a People's Democracy

JAMES B CHILDS

1 Common Misconception and the Need for Clarification

"All publications are official publications" in the Soviet Union, is a comment of Peter R Lewis in the section on official publications in the *Literature of the social sciences* (London, Library Association, 1960). This apparently fairly common impression seems to be based on confusion of the close relationship and intertwining of the political party with the apparatus of government, in combination with the concept of more or less overall national and regional ownership and operation of industry and economic enterprises.

11 "PEOPLE'S DEMOCRACIES"

The change in orientation and development of government in Russia began with November 1917, and after the Second World War extended to the "people's democracies" in Europe of

Albania;
Bulgaria;
Czecholsovakia;
Germany (Democratic Republic);
Hungary;
Yugoslavia;
Poland; and
Rumania;
and in Asia of

China (with capital at Peiping),
Korea (North Korea),
Outer Mongolia, and
Viet-Nam (North Viet-Nam).

12 COMPLEX PROBLEM

These changes have presented an extremely complex problem as to the actual organization of the government itself and as to its official publications Indeed, it is so complex as to have given rise to the fairly common misconception mentioned above At the same time this situation, along with the lack of knowledge generally of the official languages for the most part of these jurisdictions, results in a frustration for the increasing number of librarians as well as for others needing and desiring to have available an adequate representation of such materials All in all, the problem seems never to have been analyzed

In the preface to *A study of current bibliographies of national official publications* (Paris, UNESCO, 1958), edited by Jean Meyriat, there is expression of the same concept in the following words "Countries where the entire product of the printing presses may be regarded as official because it is wholly under government control" The matter is treated a little more explicitly on page 253 in a note under the section devoted to the Union of Soviet Socialist Republic's as follows "Pour les pays dans lesquels toutes les publications sont dites officielles du fait que les gouvernementsy controlent toute production, nous entendrous par 'publications officielles' les publications emanant du pouvoir legislatif, du pouvoir executif (chef du gouvernement, ministeres et services administratifs) et du pouvoir judiciaire De meme, les imprimeries et maisons d'edition etant generalement toutes appelees officielles, nous ne mentionnerons comme telles que celles qui centralisent l'impression, l'edition ou la diffusion des publications gouvernementales"

13 ALA RULES

Comparison of this rather vague characterisation, or even misconception, with the statement on page 126 in the *ALA cataloging rules* (ed, 2 Chicago, 1949) that "governments and their agencies, societies, institutions, firms, conferences, etc, are to be regarded as authors of publications for which they, as corporate bodies, are responsible" would seem to indicate a need for clarification The need is crying that it be possible to understand the organization of these governments, to determine what are their official publications, and to be able to understand and appraise the data presented in them in the governmental and administrative peculiarities of the languages

2 Bibliographical Control of Official Publications in and for the "People's Democracies"

In volume 2 of the bibliographical contributions (Trudy) from the Library of the Academy of Sciences of the Soviet Union and from the Social Sciences Library of the Academy, published in 1955, there is an article dealing with the bibliography of the official publications of foreign governments (that is, of countries other than the Soviet Union). None of the "people's democracies" seems to be represented, however, and this great blank in national bibliographical control should be a challenge of the first magnitude

Indeed, there seems to be little awareness of the fact that the Russian section of the *List of the publications of foreign governments, 1815-1931* (New York, Wilson, 1932) contains the first thoroughgoing attempt to systematize and record the agencies and official publications of a "people's democracy" before that phrase gained its present currency The section was edited by the late David Judson Haykin with the unending and discerning assistance of the late Vladimir Gsovski Hidden as it was at the end of the larger and not too widely distributed work, the contribution has remained relatively unknown, as a pioneer contribution in the field In the thirty years that have intervened, the changes under the impact of the Second World War have been so far-reaching that there is need not only for bringing it up-to-date, but for extending its scope to include all official publications, not serials alone

3 German Democratic Republic as a Typical Example

Preparation of a survey entitled *German Democratic Republic official publications, with those of the preceding Zonal period, 1945-1958*[1] has afforded opportunity for analysis of the problems, based on a reasonable assumption that the government of the Democratic Republic has in most features considerable similarity to the governments of the other "people's democracies" mentioned above At the same time, this jurisdiction is one having possibly the greatest attempt at overall bibliographical control Its official language, German, is more generally understood than the official languages of the other countries mentioned, despite the newer and continually changing and developing governmental, administrative and legal aspects

In this "people's democracy," certain noticeable and rather confusing types of governmental operations and of official publications seem to have developed Two of the most thorny points are presented by the government operation of industry and by the official publishing A third point, the close relationship and intertwining of government with the Sozialistische Einheitspartei Deutschlands, represented often through the usual holding of the highest government offices by the highest party officials, presents some complications militating against its further treatment here

From mid-1945 to 1958, the complexity of the government of the Soviet Zone and then of the German Democratic Republic in all its ramifications has seemed baffling. At no time has there been available a government organization manual, or anything approaching it, nor even a detailed executive budget Whether or not these exist for limited official use has not been determined. Lists of the ministries and some of the other agencies of the national government have appeared in the *Jahrbuch der Deutschen Demokratischen Republic*, which was edited beginning with 1956 by the official Deutsches Institut fur

Zeitgeschichte Even in this work the entries often bear no indication of the relationship of agencies to ministries or to the government, or whether or not they are governmental The "Anschriftenverzeichnis" at the end of each volume of the *Jahrbuch der DDR* contains not only the section "Die Regierung der DDR," but also "Weitere zentrale Regierungsdienststellen," and further sections for "Urtliche organe der Staatsverwaltung," "Dienststellen und Institute der Wirtschaftszweige," "Volks-bildung," "Gesundheitswesen," "Wissenschaft und Kultur," and so forth Each section is devoted almost entirely to listing the various governmental agencies according to such groupings

In the *Amtliches Fernsprechbuch fur den Bereich der Bezirksdirektion fur Post-und Fernmeldewesen Gross-Berlin, 1960*, Deutsche Post, there are about four narrow columns under the heading "Regierung der Deutschen Demokratischen Republik" Many other agencies such as the Deutsche Post and Deutsche Reichsbahn are listed directly under their own names

Since there are no specific guides to governmental organization, the only practical approach to the problem of determining what are agencies of the government had been to sift and collate all pertinent references in the *Gesetzblatt der Deutschen Demokratischen Republik* (Law Gazette of the German Democratic Republic) and its predecessor publications. Numerous changes and reorganizations were not always too clearly indicated, not even obliquely, and the agencies were not always indexed Even at best, the details of a large government may be puzzling to the well-informed In the *Gesetzhlatt* the emphasis seems to be upon plans, upon decisions of the Sozialistische Einheitspatei Deutschlands (SED), and upon decisions of the Staatsrat (the present chief executive) and the Ministerrat (cabinet), but upon matters of government organization except as incidental to the plans

4 Operation of Industry

Government operation of industrial organizations is one of the areas where it is most difficult to distinguish accurately the governmental status of organizations In the beginning, in the Soviet Zone of Germany an official notice of the Soviet Military Administration (SMAD), dated September 12, 1945, indicated that eleven all-zonal German administrations, comparable to major government departments, were functioning in the Soviet Zone, in addition to the five Lander (State) governments. (These eleven administrations had been established actually by military Government Order (Befehl) number 17 of July 25, 1945, which seems not to have been printed [2] Within the next months, government activity moved into the economic sphere. Ownership and operation of industrial and economic enterprises (Volkseigene Industrie, Volkseigene Betriebe) were instituted by Military Government Orders, following the plan of the Soviet Union organization. Another complicating factor, the Sozialistische Einheitspartei Deutschlands (often called the SED), was not organized until April 21, 1946, by Union of the Socialist Party and the Communist Party in the Soviet Zone as the top one of the mass organizations, pervading and controlling the Government

With the establishment of the Deutsche Demokratische Republik on October 7, 1949, much, if not most, of the then state-controlled and operated industry was grouped in the Ministerium fur Industrie. This and all the other ministries and central agencies of the government seem to be given usually the status of "juristische person," and still retain their status as central agencies of the government In November 1950, the Ministerium fur Industrie became three separate ministries

Leichtindustrie,
Maschinenbau, and
Schwerindustrie

In November 1951, Schwerindustrie became Huttenwesen und Erzbergabau. In December 1952, Maschinenbau was replaced by the following three ministries

Allgemeine Maschinenbau,
Schwermaschinenbau, and
Transportmittel-und Landmaschinenbau

Early in 1954, these three were combined in a single Ministerium fur Maschinenbau In November 1955, the Ministerium fur Schwer-industrie became three ministries as follows

Berg-und Huttenwesen,
Chemische Industrie, and
Kohle und Energie

In February 1958, however, a new organizational pattern emerged Action was taken to liquidate the Industry Ministries as of July 31, 1958, regrouping the industries into a whole series of Vereinigungen Volkseigener Betriebe (VVB) to be grouped under various sections of the Staatliche Plankommission, as reconstituted While the Staatliche Plankommission approves and issues the basic status of each VVB and appoints the managing director, the VVB apparently group together on the national level the various plants (Betriebe, Volkseigene Betriebe, or VEB) and other organs of a specialized industry such as the VVB Automobilbau Each plant is even likely to have its own identity as an individual firm A few VVB are being operated under other ministries such as the Vereinigung Volkseigener Betriebe Verlage under the Ministerium fur Kultur

At the present time in the German Democratic Republic, therefore, government ownership and direction of industry has been established in a pattern which gives an organizational identity to groups or combines of related industries or identity even as separate industrial plants From the viewpoint of the political scientist, these are not "agencies" of governmental organizations broadly speaking From the viewpoint of the library cataloguer, they are not subordinate agencies of government to be treated for the most part as subdivisions under jurisdiction, but are rather separate corporate bodies, to be treated under their own names

5 **Official Publishing Houses and Official Publications**

In a "people's democracy", one criterion of identification of a publication as official might be its issuance through an official publishing house, but this involves some difficulties and special considerations In March 1946, the Deutscher Zentralverlag had its origin as the publishing office for the German central government departments The Volk and Wissen Verlag was set up in October 1945 as the central publishing house for school books and educational literature, and is now closely related to the Ministerium fur Volksbidung The Deutscher Bauernverlag, now called Deutscher Landwirtschaftsverlag, was established late in 1945 as the official agricultural publishing house and has always been closely related to the present Ministerium fur Landwirtschaft, Erfassung und Forstwirtschaft The Deutsche Akademie der Wissenchaften zu Berlin, which functions directly under the Ministerrat to all intents as a general department of research, established in December 1946, the Akademie-Verlag for the handling of its publications These and other official publishing houses apparently have in addition to the handling of official publications, the right to publish on their own responsibility, in their fields of specializations

A further criterion exists The regulation for compulsory deposit of printed matter of September 1955 has been revised by a regulation of the Minister fur Kultur, dated July 4, 1960, printed in the *Gesetzblatt der Deutschen Demokratischen Republik*, Teil I, July 22, 1960, pages 423-424 The regulation applies to all works reproduced by print or similar process, including magazines and newspapers, independent maps, prints, musical scores and pictorial works, with or without text The obligation to furnish copies is incumbent upon all

publishing houses,
state agencies and institutions,
business and industrial enterprises,
political parties;
organizations,
societies,
religious bodies, and
persons having the above reproduced

Of publications in the booktrade, two copies must be furnished to the Deutsche Bucherei in Leipzig, one copy to the Deutsche Staatsbibliothek in Berlin, and a copy bearing the licensing provision to the Ministerium fur Kultur (Abteilung Literatur und Buchwesen) Of publications not in the booktrade, one copy must be furnished to the Deutsche Bucherei, one to the Deutsche Staatsbibliothek, and one to the office granting permission to print, and further, of all official publications which are not intended for public distribution and use, one copy must be furnished to the Deutsches Zentralarchiv at Potsdam Independent maps are subject to somewhat similar requirements with the inclusion of two copies to the Ministerium des Innern (Hauptverwaltung Karten-und Vermessungswesen) Furnishing of official publications which are not intended for public distribution and use, especially from the Deutsche Volkspolizei, the Ministerium fur Staatssicherheit and the Nationale Streitkrafte, is subject to special regulation In addition, there are six regional depositories, one copy each, for all works produced within the region

While there are no definitions in the regulation, and none found in other sources, there is very clear designation An official publishing house might possibly be a state agency or institution, or even a business and industrial enterprise Yet a state agency and institution is not a business and industrial enterprise, or a political party, organization, society or religious body There would seem to be a decided indication that official publications are and may be in the booktrade, and further that there is a considerable body of official publications not intended for public use and distribution (as well as those intended for free, directed or exchange distribution), and that the furnishing of these for legal deposit is to be the subject of a special regulation, not yet seen

In the *Postzeitungsliste fur die Deutsche Demokratische Republik und den demokratischen Sektor von Gross-Berlin*, which includes the periodical publications placed on subscription through the post offices, there is no listing for a single *Wissenschaftliche Zeitschrift* issued by any university or other institution of learning Even in the entry for *Verfugungen und Mitteilungen*, so far as included for various ministries, each bears the designation "Nur fur den Dienstgebrauch" (for official use only)

Continuing interest in the collecting and recording of German official publications is expressed by the Deutsche Bucherei, Leipzig, in its *Neue Mitteilungen aus der Deutschen Bucherei*, number 15 (4 p) of July 1957, which is entitled "Sammlung and Verzeichnis der amtlichen Druckschriften " As some may recall, the Deutsche Bucherei edited a monthly list of German official publications for 1928 to 1944 under the title *Monatliches Verzeichnis der reichsdeutschen amtlichen Druckschriften*, listing the materials, under the publishing or editing agency Beginning with mid-1945, a whole new set-up of agencies had to be established for the special catalogue of official publications at the Deutsche Bucherei even though the publication of the monthly list was no longer possible Official publications in the book trade are registered in Reihe A of the *Deutsche Nationalbibliographie* The majority, which are not in the booktrade, are registered so far as received in Reihe B Since neither Reihe A nor B makes provision for registering or grouping under the publishing or editing agency, the Deutsche

Bucherei in 1957 made provision for indexing of official agencies in the quarterly indexes of both series under the heading "Behorden-register" as opposed to "Organisationen-und Firmenregister "

6 Conclusion

Despite the apparent lack of understanding and control over the matters of official publications in the German Democratic Republic, there is in the regulation for the compulsory deposit of printed matter a definite, though not precisely defined, recognition of differences both between state agencies and other bodies and between official publications of state agencies and other publications It is to be hoped that this paper and the four volumes of the *German Democratic Republic official publications* may,

1 help in the tearing away of the "iron curtain" or "bamboo curtain" hiding the different approach to government and its publications,
2 enliven the collecting and utilization of these materials despite all existing barriers, and
3 encourage similar studies for other "people's democracies "

7 Summary

That all publications are official publications in a "people's democracy" is a common misconception The number of "people's democracies" has increased since 1917 sufficiently to present a need for more precise understanding With the exception of one work, now outdated, there is no overall bibliographical control of official publications in or for any "people's democracy" The instance of the German Democratic Republic, for which a four volume survey has been completed, seems to be typical one, for several reasons susceptible of being understood rather more readily than the others Problems of the government and control of industry are presented The determination of official publishing and official publications seems much more different and somewhat more precise than the misconception The whole presents a challange for greater understanding of the situation in the other "people's democracies," and for the undertaking of work towards overall bibliographical control

BIBLIOGRAPHY

1 Issued by the Library of Congress in 1960-61 as a four volume operational document in an edition of fifty copies for limited distribution, and being otherwise available in microfilm

2 John Mason Brown has pointed out in the *American political science review*, 53 508 (1959) "Most Befehle were made known only to the German immediately concerned with their execution "

CHAPTER E5

Dr Ranganathan and Proposal for Co-operative Cataloguing

MAURICE F TAUBER

0 Works of Dr Ranganathan

DR Ranganathan has now issued 48 volumes dealing with library practice and theory. The works cover all phases of librarianship. However, he seems to have made his greatest impression upon Western librarians through his Colon Classification and particularly through his theories of classification.

1 Comparative Study of Cataloguing

In *Heading and Canons : Comparative study of five catalogue codes (1955)*, Dr Ranganathan turns again to cataloguing, and his approach is a rigorous analysis of rules of entry in the *A L A cataloguing rules* for author and title entries. The Prussion Instructions (1939 edition translated by Andrew D Osborn), Cutter's *Rules for a dictionary catalogue* (4th edition, 1904), and the Vatican *Rules for the catalogue of printed books* (tr from the 2nd edition by T J Shanahan and edited by Wyllis E Wright, 1939). In his analysis of these codes, the author compares specific rules and introduces his previous decisions on these rules by reference to his *Classified catalogue code* (3rd edition, 1952). The approach is based on a set of "Fundamental Principles and Canons of Cataloguing" first formulated in his own *Theory of library catalogue, 1938*. Subject cataloguing and series entries are given only passing attention.

11 HEADING AND CANONS

The front flap on the dust jacket of the volume states that:

1 "This is a book of the hour";
2 The book is equally of permanent value,
3 The critical study of the Choice and Rendering of Heading culminates in the formulation of an International Standard Practice for title page and its back;
4 The long-continuing faults of the Anglo-American and the Vatican codes in the choice of Governmental and Institutional headings are laid bare;

5 Standards for International, National and Local Catalogue Codes are outlined,
6 Finally, details are worked out for Pre-Natal Cataloguing of books and National Union Catalogues with centralisation at the national level and co-operation among nations, and
7 The scheme is shown to effect a saving of 79% in the cost of cataloguing

2 CCC—An International Code of Rules

In his "Prologue", Ranganathan reviews the pre-code period, emphasizing the influence of Panizzi's rules at the British Museum He then considers briefly the development of the codes-Cutter, the Prussian Instructions, the ALA code, and the Vatican Rules. He then observes "CCC (Classified Catalogue Code) takes the evolution of the catalogue code one step further The other four codes are all no doubt of a non-local nature That is, none was a code peculiar to a single library or a small class of libraries and yet, the sphere of application of each is, by implication, restricted to one language It is taken as if it were natural, without being explicitly pointed out CCC is the first code to remove this restriction This it does by means of two concepts — 1 Language of the library, and 2 Scale of languages, in which the language of the library comes first and the others come in the descending sequence of favouredness " Thus, Ranganathan has expressed his belief in the possibility of an international code of cataloguing rules In fact, he has a firm assurance that "Cataloguing has now emerged from the stage of hand-to-mouth existence and rule-of-thumb existence It has entered the stage of scientific method" One wonders, but is attracted to the idea

3 Terminology

In his discussion of terminology, Ranganathan refers to many terms which are familiar to American librarians Some terms, however may be regarded as peculiar to the framework of Ranganathan's code *e g*, thought expressed thought, pedestrian work, micro-thought and macro-thought, organ (of a corporate body), embodied thought, artificial composite book, chain procedure (*see also* entries), and individualising element On the whole, the section dealing with terminology is a good review of the nomenclature used by cataloguers, if one is willing to take the time to get accustomed to the author's style of writing

4 Normative Principles

The treatment of "normative principles" involves a consideration of general laws (Parsimony, Impartiality, and Interpretation), Laws of Library Science (knowledge of users and placing materials at their disposal economically), Canons of cataloguing derived from the Laws of Library science for immediate application (Ascertainability, Prepotence or Position, Relevance or Sought Heading, Subject Heading and Chain Procedure, Context, Permanence, Currency, Consistence, and Purity), and principle of Local Variation (inherence, script and style, personal style, analytical entry, fleeting material, selective cataloguing and change of catalogue code) Throughout these discussions, Ranganathan shows a discerning understanding of practical library operations, particularly as related to the functions of the library He observes the need of recataloguing as follows

> The Canon of Context will bring about changes in the rules of catalogue code At present this change is met in one of two ways in cataloguing practice According to one, the entire collection of a library is recatalogued The cost of this is enormous Often to find the necessary money, active service is starved, reference service is cut out, book-fund is depleted All this amounts nearly to criminal waste of library funds In the second way of practice, eyes are closed to the change in the catalogue code in the ostrich way The obsolete code is perpetuated in defiance of the Canon of Context and the Laws of Library Science, and to the neglect of readers unexpressed needs This way amounts to tying the future up to the dead past This capitulation to the dead past is fatal to any social institution, and library is a social institution ”

5 Economy in Cataloguing

The efforts of American librarians to simplify rules for entry and descriptive cataloguing have been directed at the questioning of the basis of certain data in terms of reader and staff needs Similarly, Ranganathan in his Canon of Context has related cataloguing practice to the nature of books, the characteristics of library organization and library service, and the existence of various types of bibliographical sources Related also to cataloguing are such matters as open access, development of research, and the potentiality of international subject bibliography Ranganathan points out that “only a small percentage [of books] have permanent value” Not only does thought-content become outmoded, it may even become “quite wrong in the course of time” This understanding should make cataloguers aware of the economy of their work and suggests simplification wherever applicable

6 Problems in Cataloguing

It is not possible within the space limitations of this review to analyse Ranganathan’s detailed discussions of choice of entry, rendering of entries, the problem of added entries, and title-pages In these discussions, the author develops his critical treatment of the present rules in the several codes. Many questions are raised, and some are similar to those isolated by Lubetzky in his *Cataloging rules and principles* Inconsistencies, contradictions, and redundancies are noted in connection with rules of entry for personal and corporate publications.

His remarks on complications raised by foreign names, particularly Asian names, suggest the difficulties in the establishment of an international code.

61 Scientific Attitude

In his design for a catalogue code, however, Ranganathan observes that the difference in the several codes can be eliminated He notes further :

"This requires some mental and emotional adjustment The votaries of each national code should shed all sense of national prestige They should be prepared to sit at a round table with others They should leave behind all vestiges of political superiority or inferiority They should adopt a scientific attitude " This may be much easier to say than to do

7 Pre-Natal Cataloguing

In the epilogue to the volume, the author outlines the programme for "National Centralization" The development of the Library of Congress system of printed cards, the distribution of cards in Denmark, and the eventual assistance in cooperative cataloguing by the *British national bibliography* are cited as evidence of the potentialities The organization of libraries within a country has been discussed earlier in his books, *Library development plan* (1950), and in *Library legislation* (1953) In this proposal, however, Ranganathan develops a so-called pre-natal TW (Technical Work, or cataloguing and classification) programme, whereby publishers would coordinate the issuance of new titles (in page proof form) with the preparation of bibliographical records It is claimed that complete coverage of publications by a National Central Library, according to a formula worked out by the author, would save approximately 79% in cost of cataloguing Further national savings may be made by eliminating cataloguing cards and marking holdings in a national bibliography

Similar proposals have been made in the past by American librarians, although no one has ventured to set up a formula and suggest percentage savings The proposal by Ralph Ellsworth for the extension of centralized cataloguing in the United States was designed to reduce cataloguing within individual libraries Lucile Morsch has also indicated how the extension of centralized and cooperative cataloguing could do much to cut costs of cataloguing Undoubtedly, much more work in this respect needs to be done

8 Provocative Analysis

Even though one may not always agree with Ranganathan's observations or claims, it must be said that the volume is a valuable contribution at this time when we are re-studying American cataloguing rules and when there is interest in establishing codes which may have international use The DCC Code Revision Committee and the person or persons who may be doing the revising of the American code in the future should find his analyses provocative

CHAPTER E6

Copying of the Old Catalogue of the Austrian National Library

JOSEF STUMMVOLL AND LAURENZ STREBL

0 Old Catalogue

THE Austrian National Library in Vienna has a hand-written alphabetical card catalogue for its old book holdings with year of publication from 1501 to 1929, (only one copy is available). Available in a unique copy, this catalogue was according to a special system prepared in 1884, the year of revolution, and since then it has been maintained up-to-date. In 1930, as part of collaboration in the *Deutscher Gesamtkatalog* (All-German Catalogue), work had begun on the preparation of a new catalogue according to the system of the *Prussian Instruction*. But in the year of publication prior to 1930, the new acquisitions are even now included in what is known as the "Old Catalogue".

1 Contents

This Old Catalogue is the catalogue of a library which can claim a century-old history. The gradually accumulated holdings of the former Habsburg Imperial Royal Court Library were constantly enriched by valuable collections of books. Collections grew up by absorbing the possessions of the Vienna Humanists, valuable monastery libraries, big book auctions, the old Vienna University Library, collections of the Fuggers and especially the library of Prince Eugene of Savoy. The submission of books for censor and for granting printer's patents expanded the collection since the 16th century, so that the book production of the German *Roman-empire* is well represented. The collection of Spanish literature of the 16th and 17th centuries is of great significance.

The regions of Italy and Netherlands connected to Austria are well represented over a long period. But even the Slavic works constitute an important part. Of these holdings the contribution to the development of the science of Slavonic language and literature in Vienna is decisive. Further, the catalogue contains a rich holding of valuable oriental works in Roman transcription. Housing a total of nearly 700,000 works the catalogue includes numerous interesting valuable and rare books and first editions.

2 Entries

The catalogue cards numbering nearly 1,300,000 (22 5 cm × 17 5 cm,) lie protected in cabinets But owing to several years of use they are much torn out Since, as already mentioned, there is only one set of the catalogue, only the library officials are allowed to use it and it is not accessible to the public Readers' requisitions are looked up by a permanent Catalogue Service The need for pressing the valuable catalogue as well as for providing the users of the library with a list of holdings prior to 1930, has led to the decision of copying and duplicating this catalogue in cards of international format (17 5 cm × 12 5 cm)

3 Duplicating Processes

Different duplicating processes were considered Photographic method was not of the question, since the legibility of the old handwriting would on reduction be rendered nugatory Moreover, the considerably large cards in high format cannot be reduced to the smaller international broad side format After thorough discussion and comparative tests, the following solution was decided upon to copy the catalogue with duplicating typewriters of the firms IBM and Remington Rand on cards of international format

4 Copying of the Catalogue

On the basis of guiding rules worked out for the purpose of copying the catalogue, and guided by a trained librarian, a group of students scrutinises the handwritten original for purposes of legibility, abbreviates the text with blue-pencilled brackets and completes the location number on reference cards Further, the old location numbers with additions are brought to the form as is used nowadays In describing the books, the old catalogue itself is not uniform "A certain usage was established after working for a long time", says the introduction to the rules published in 1901 Already the rules themselves are partly obsolete First comes the copying of the catalogue Besides, a processing of the catalogue is out of the question, because owing to the lack of time and shortage of staff, references cannot be made directly to the books themselves

5 Process of Copying

After preparation, the abbreviated handwritten cards reach the copyists The copyist works on a master typewriter, to which are connected the two types of typewriters IBM and Remington, four to each master typewriter Thus the result of one copying process is five catalogue cards The transmission of power from the master typewriter to the four subordinate typewriters is electrical in the case of IBM typewriters and through vacuum in the case of Remington typewriters In the latter case, the typewriters are inter-connected by a number of thin plastic tubes, two electrically operated bellows produce the constantly required low pressure The typewriters themselves are electric in both the systems The typewriters aggregates are extremely delicate in design and are sensitive to dust and temperature There are occasional mechanical defects which are set right as promptly as possible by the mechanics of the firms, so that the progress of work is not hindered by breakdown in the machines In order to save the labour of repeated adjustment of individual catalogue cards, paper strips (catalogue board) are used, in which there is space for five card copies, one below the other

After copying the cards, proof-reading is done with the help of the original Proof-reading and correction is done by the staff who prepared the cards for copying Any error is corrected by black ink If there are several mistakes in a card, a second 5-fold copying is unavoidable In such a case, the five strips (each with five catalogue cards) are fastened by a clip and handed over to the copyist, being placed in alphabetical sequence in the stock (*i e* the copy contents of one of our old catalogue boxes of nearly 750 cards) The clips protrude slightly on one side of the heap, indicating to the copyist which items are to be recopied After correction the cards are cut according to international format The next job is to arrange in an alphabetical sequence the cards of the old catalogue At this stage the wrongly copied cards can be exchanged for the corrected cards which had to be copied a second time The reason is that the previous five copies were in one strip

The five similar cards, that are connected together, are not separated while filing for technical reasons (facility for inspection, filing of new addition and changes) Later two sets are entered in the alphabetical catalogues (catalogue for general use and catalogue for official use) and the remaining three form the subjects catalogue

In addition to the copying work of the copyists and the work of the assistants (doing preparation, correction and filing) there is a number of organizational jobs (cutting of the strips, carriage following superscriptions on the cartons for storing the cards cut, etc) Here also we thus find at work Ranganathan's law that the "Library is a growing organism"

6 **Work Accomplished**

Nearly 25% of the Old Catalogue, which is maintained along with its copy as the more complete, more exact catalogue, could be copied since early 1959 Owing to various circumstances it is difficult to fix a target date for the copying and it depends primarily on the means available for this work Completion of copying is expected to consume 5-6 years

In June, 1961, printing of the catalogue in book form was contemplated The Akademische Druck and Verlagsanstalt Graz can bring out the book by the photo-offset process, if there is a sufficient number of subscribers. The book will consist of 18 volumes (Format 25 5 cm × 37 cm) of 1200 pages each (60 cards per page)

7 Help to Scientists

Thus as an international general bibliography in a book form the Old Catalogue could not only serve to open up the present holdings of the Austrian National Library but also serve for the scientists

PART F

CATALOGUING IN JAPAN

CHAPTER FI

Problems in Search of Common Bases in Cataloguing

HATSUO NAKAMURA

0 Revision of ALA Code

AT first the writer feels the responsibility to the reader to give the following explanation as to how he came to such rambling thought.

At the Institute on Cataloguing Code Revision sponsored by the Cataloguing and Classification Section of ALA, the problem of the International Aspect of Code Revision[1] was discussed among other problems.

Mr Andrew Osborn's paper read by Mrs Alfreda W Williston suggested in the summary that IFLA might devise a master code which an individual country or groups of countries, would adopt, especially by providing appropriate national examples. . .

Chairman Wyllis Wright stated that ALA wants to be able to present to an international meeting a set of rules well thought out and thoroughly discussed, yet not solidified. . .

1 International Meeting

The time for an international meeting and for the publication of new rules was also discussed. Some spoke in favour of delaying the publication of the new rules in order to give more time to achieve as much international agreement as possible. Another expressed his concern "that if an international meeting is long delayed, too many divergent codes will have been solidified." He, as a representative of the IFLA Working Group, had in mind the drawing up of some basic principles for discussion and possible international acceptance.

11 INTERNATIONAL CO-ORDINATION OF RULES

When I was asked by the chairman to make a comment on international co-ordination of rules, I spoke of my appreciation for the cooperation of *international librarians*. I commented at the same time, that the co-ordination can be made on the basic principles only, and not on technical details. I also pointed out some features of the Japanese language, which might somewhat result in making the cataloguing procedure different

12 Comments

Soon after making this comment, I began to wonder whether my comment had been appropriate to the main problems discussed. I was afraid that the audience might have thought that I put the stress only on the last part For no one, except a Chinese colleague, Mr Eugene Wu of Stanford University, made any criticism on my comment afterwards although there were number of people whom I had known personally. I had expected more response, favourable or unfavourable May be they could not understand my English Or my comment was too vague and lacked concrete examples

13 Expression of Views

Judging from various opinions expressed at the Institute concerning the international code, I feel that the point that I stressed is worthy of pondering for librarians I would like to express my special thanks to Prof P N Kaula and to Dr Ranganathan for giving me the opportunity to write

2 Japanese Cataloguing Practice

I should like to point out some special features which exist in the Japanese library world, but not as a negative criticism against the international code Rather I would like to contribute something setting up a more sound base for the drawing up of the master code for international use

21 Seal for Signature

As you know, we Japanese use a seal (stamp) instead of a signature for personal identification These two ways of identifying a person may seem quite different from each other But both of them can serve perfectly as means of identification Though as many similar seals can be made as we want, each of them is a little bit different from each other On the other hand we can sign in many ways, but there are always some identical strokes or touches in them

3 Recent Change in Japanese Librarianship

31 Bun-Rui

It is true that the concept of International librarianship is predicted on the fact that we are all facing the same problems I know, however, that clarifying the point wherein lies our differences, is the best way to find out our common problems It will be perhaps of interest for the non-Japanese to know, that the Japanese word, Bun-rui, the equivalent for "Classification" or bringing together into classes, means literally, dividing or distinguishing classes

32 Language Difference

It is perhaps also noteworthy that Japanese library-world had paid special attention on the problem of choice of main entry, author versus title This problem was once a most acute one because of our language difference In Japanese we never say Textbook of physics but we always say Physics Therefore, we have less need for subject headings For decades this problem resulted in hot debating among Japanese cataloguers During our debating, we sometimes lost our insight as to what catalogue actually is

33 Anonymous works and Title Entry

Many of the Japanese classics are anonymous and naturally they have to be entered under their titles As far as a librarian is concerned, this does not matter He is not charged with taking the place of the scholar and determining the author It is his job primarily to provide a system by which a reader is guided to the work The task will be easily accomplished in such a case, by a title entry I know some Japanese librarians may not be pleased with my statement I still think the role of librarians the same as that of the catalyst in a chemical reaction The council on Library Resources, Inc , Washington rephrased the concept in its second annual report (1957/58) as follows

The objective of library work is to be able to provide the reader, no matter where they may be, with *information as to what recorded knowledge exists applicable to his interest*, [italics are mine] and to be able to furnish him with the relevant portion of that record, no matter where it may be located

34 Potency of an Author

The librarians, who insisted solely on the title entry for the main entry, ignored the advantage of author entry in distinguishing one item from another Taking into consideration the ever increasing amount of publications, especially in the field of the social sciences, natural sciences and technology, where titles are very often similar, the entry under author names are certainly reasonable, so far as they are ascertainable

35 Nippon Cataloguing Rules

Now we know the moderate way, *i e*, to take both depending upon the situation To my mind it seems that in the present edition of the *Nippon* (Japanese) *cataloguing rules*, more emphasis is placed on author entry compared to the *ALA rules*. I believe, however, that the balancing to fit the real needs and situations is in process on a more practical basis

36 INDECISION ABOUT CLASSIFICATION

There is also need for very careful discussion to decide whether the Japanese librarians are still thinking that the classification system is the final aim and that there is no other aid which may be used to locate volumes Although in many cases library practice in Japan indicates such a tendency, the real reason for that may depend upon other circumstances, *e g* social status of librarians, or the small financial support for library activities

3/ PLEA FOR A CLASSIFIED CATALOGUE

I remember the comment made by the late Toshio Eto, the chairman of Japan Library Association in 1948, classification is merely for convenience We must in any case and at any cost, develop a good subject catalogue as well as good indexes

38 SUGGESTIONS TO THE NATIONAL DIET LIBRARY

Also the fact that most librarians in Japan approved and welcomed the suggestions made to the National Diet Library by Dr Robert B Downs[2] shows the modern concept of librarianship possessed by the Japanese librarians In his final report, among other things, Dr Downs recommended that,

1 The National Diet Library adopt the expanded and revised edition of the Nippon Decimal Classification for its Oriental books and the 15th edition of the Dewey Decimal Classification for books in European languages,
2 Author (Cutter) numbers be used, developing special Cutter,
3 Classification and author numbers be used for shelving books,
4 Authors' names, when available, be used for main entries in cataloguing,
5 Authors' names, book titles, and subjects headings be romanized on catalogue cards, and
6 Separate dictionary-type catalogues be organized for Western and Oriental books

391 ALL-ROUND GROWTH

I already mentioned in the preceding paragraph the small financial support given for library activities Library subsidy in general had been increasing since 1950 The increasing rate was, however, higher in buildings, gadgets and books, and less in personnel Worse than that, the library subsidy has shown the tendency to be decreased since 1956

What we need very urgently are not theories, nor concepts alone, but the ability to persuade others and the energy to demonstrate the idea This must also be taken in consideration in the case of educating librarians as well as selecting the applicants to the professional schools

4 Special Features of Cataloguing in Japan

Now I come to the real problems which are bound up in the Japanese language itself

41 Filing of Cards

In Japan, cards for Japanese material are filed phonetically, whereas cards for Occidental material are filed alphabetically This difference does not occur in a language whose written form is identical to the spoken form Even in the case of languages that are written phonetically, a slight departure can be expected due to the adoption of foreign word I think that the Western use of alphabet as a filing medium is indeed a wise choice One can readily imagine the great number of difficulties that would be caused, if cards for Somerset Maugham (Mom) or Melvil Dewey (Dui) are filed phonetically Furthermore, one must consider that the written communication in Japan is more respected than that in the spoken form, compared with other countries In respect to the identity of the written to the spoken language, Japanese is far from ideal To speak of Japanese language itself, it is one of the most heterogeneous languages of the world At the end of the third century A D a Korean scholar, (Wang In) brought, as a tribute, copies of the *Analects* by Confucius to the Japanese Imperial Court This may have been for the Japanese the first contact with Chinese characters Since then we have continued to use Chinese characters in our writings but not necessarily with the same Chinese pronunciation Since the Chinese pronunciation for each written character varies within the various districts of China as well as within the historical ages, how can we adopt their pronunciation? We adopted, primarily, the characters with their meanings and gave our own sounds (Kun) to these characters But at times a character is pronounced nearly same as it is in one of the districts of China(On) As the use of complicated characters as a tool to represent pronunciation proved inefficient, a Japanese priest in the eighth century A D devised a syllabary (Kana) in a simpler and more intelligible form All the elements, which have been developed during a period of over fifteen centuries are still in use in the modern library life of Japan Efforts to use the "Romanization" or Kana-writing are not realized yet in practice

42 Style of Script

The form or style of script and sentence has also variations in different ages and according to various schools of calligraphy, and is often unintelligible to the modern Japanese But this difficulty may be compared with that of the cataloguer of manuscript materials everywhere and in every language I do not wish to spend too much time along this line

43 COMBINATION OF CHARACTERS

May I mention another reason which makes filing according to pronunciation difficult? In many instances the pronunciation of characters in combination is different from that of single characters This may occur in Roman alphabet but the filing is not by the pronunciation The change of pronunciation results slight change in spelling, when they are written in the Japanese syllabary (Kana) However, when written in the romanized alphabet, the variations between k to g, s to z, t to d, h to b or p, u to i, the insertion or omission of n, y, s, or t would create a serious problem in filing

44 FILING BY PRONUNCIATION PREFERRED

I am not saying that the four-corner system or filing with stroke numbers for Chinese characters is preferable to the phonetic system These methods are directly bound to the written form of the language and are in accordance with the prevailing principle in the Occident as the filing medium They may be, theoretically, the best way in which to maintain some degree of uniformity in filing Oriental material But in practice how can this be brought about? I have already mentioned that Japanese librarians are trying to file the cards according to the pronunciation and only in the case of characters having the same pronunciation is the stroke number considered as a secondary medium for filing Chinese-Japanese dictionaries arrange, in general, the characters or words according to the form of the written character (Parts, stroke numbers) That arrangement has lately become unpopular and that by pronunciation has become more and more preferred The former arrangement by the form of written characters, which was so predominant, can no longer meet the needs of the average user, but it is still a very necessary tool for the specialist or for special uses I personally believe that, as far as the library catalogue in Japan is concerned, we will continue to file the general catalogue cards according to the pronunciation, as long as the library is an institution serving the public For special needs an index card file relating characters to pronunciation or a special dictionary may be consulted

45 ROMAN VS NIPPON—SHIKI SYSTEM

To make the arrangement by pronunciation possible, we use the romanized form for the convenience of filing, at the same time (as the by product) we can expect to contribute to the mutual understanding among librarians in the world Here again we see the reason for indirectness and non-uniformity

We have two different patterns of romanization, one is the Hepburn system, which is more clear and intelligible to English speaking people The other, the Nippon-shiki system (Kunrei-shiki), is constructed so as to find more regularity in the Japanese syllabary and is easier to learn by Japanese school children The difference between the systems is not too great. If we can agree to use one or the other and remain with it consistently, there will be no more problems Each system can be easily transliterated

46 WORD-DIVISION

I wish to discuss one more difficulty concerning the processing of materials in the Japanese language It is a problem of word division This problem was very thoroughly studied by the librarians of Far Eastern libraries in America[3] as well as by the librarians of the International Christian University in Tokyo This problem, however, is deeply rooted in the development of the Japanese language itself There are no complete set of rules for word division Some attempts were made to do this mechanically and efficiently by setting up a maximum number of characters or syllables in word One system would limit a word to one character, another would limit it to two characters, while a third would limit it to ten phonetic syllables The romanization of each character as a separate word, except in proper names, can be advantageously adopted in Chinese material But for the Japanese language, which also has a syllbary alphabet, this would not be the solution The limitations to two characters or ten syllables are inconvenient in their application The National Diet Library in Japan is very sceptical on this point and files the cards for Japanese-Chinese materials by a letter by letter method There are also some librarians of Far Eastern Libraries in the United States, who believe the "letter by letter" method is the only solution

47 READING OF CHARACTER

The fact that there are various ways of reading the same character and in our situation we file entries according to the reading of the Chinese characters—urgently calls for a cooperative or centralized processing of Japanese materials in larger units The National Diet Library in Japan is making a great contribution along this line, although many difficulties are created

471 AN ILLUSTRATION

I once heard a Japanese lady, who had just visited one of the best organized Far Eastern libraries in United States, say, "My father's name is not Ueda, *Man'nen* but Ueda, Kazutoshi" when she found a card romanized and filed as Ueda, Man'nen. Perhaps she had had no occasion or need to look up her father's name in library catalogues in Japan Not only she, but many Japanese librarians who are acquainted with the authority of heading in Western libraries tend to think the way she does It took some time for me to explain her that the problem of the romanization of the heading is considered on the basis of both cost and scholarly satisfaction

In some cases, the reading of Japanese names will at best be conjectural, and no assurance can be given that the readers who are looking for the works will make the same conjectures If one wishes to see the authority for the heading of Japanese collections develop to the same degree as that of Western materials, then one must go back to the very cumbersome 4-corner system or something similar to it

5 Over-Cataloguing

The following story was not directed toward librarians and not directly connected with Japanese language However, I think, it makes the aforementioned compromise—an often used method in library techniques—clear A famous Japanese physicist, Ukichire Nakaya 4 was asked to submit a contribution to the *Encyclopedia Americana*, he did as requested, but later he wondered why the editor of *Americana* was so anxious to use full names instead of the abbreviated form of names Such names as Kepler, Descartes, J E Church, H Weickmann in his original manuscript were changed to Johann Kepler, Rene Descartes, James Edward Church, Helmut Weickmann

If we are to assume that the article is to be read exclusively by readers whose interest lies within a special field, it may then appear as a somewhat overdetailed statement because there exists no danger of conflict But in the *Americana*, an encyclopedic work of such a comprehensive nature, or in a library catalogue where the chance of conflict is to be expected, making use of the full names is a wise policy But even here this is a matter of degree and also a compromise between costs and conveniences gained by input The name A A Sigson in Nakaya's original manuscript remains unchanged, because the editor of *Americana* failed to get further information concerning that name If one is to spend too much time in seeking a full name to establish a new entry such as A A Sigson, this clearly is a case of "over cataloguing" Where a real need exists to avoid a conflict, we can begin our search anew (This is my understanding of the no conflict policy of the Library of Congress) Too much eagerness in "overcataloguing" very often leads to "miscataloguing" In his original manuscript Nakaya mentions the name S Tamura without giving the full first name *Sen'nosuke* He found to his astonishment in the copy received from the editor that the editor had assumed that S Tamura was Satoru Tetsu Tamura, who in 1905 had published his Ph D dissertation *Mathematical theory of the nocturnal cooling of the atmosphere* at Columbia University Such misinterpretation or "miscataloguing" can happen even in the best organized library

6 No 'Miscataloguing'

We librarians must do our best to keep such miscataloguing at the minimum At the same time, we librarians must recognize the ever increasing flood of publications and the demands of the growing patrons, and must exert ourselves to build up our catalogues as a key to the collection The same can be said to the degree of detailedness of descriptive cataloguing itself Even though individual entries may not contain a considerable amount of details, they should give to the searcher the necessary clues to access to material

In conclusion I would rather say any system is neither all good nor all bad So far as we can save the time of our users and can show patrons shortcuts to knowledge or information, we must continue our effort building up the system

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CHAPTER F2

The Survey of the Present Situation of the Cataloguing in the Prefectural Libraries and five City Libraries in Japan

KINTARO HATTORI

0 Introduction

THIS paper is concerned only with the present situation of the cataloging in the prefectural libraries and five biggest city libraries in Japan.

The questionnaires were sent in the Spring of 1957 to the fifty libraries. The list of the libraries to be surveyed was compiled from the 1956 edition of the *Libraries in Japan*, edited by the Japan Library Association.

The response was very good. Replies were received from all the libraries asked. All the prefectural libraries and five biggest city libraries were the object of the present survey.

The questionnaire used is given below:

Name of library
Number of volumes

1 What type of books has your library ?
2 How many volumes did your library acquire during the fiscal year 1956 ?
3 How many arrangement of cataloging have you ?
4 What is the percentage of the holdings by the Nippon Decimal Classification ?
5 What proportion of the cataloging staff is to the other library staff ?
6 Have you a staff manual for training the new employees ?
7 What forms of the public catalog have you ?
8 What forms of the official catalog have you ?
9 What cataloging code do you follow ?
10 How many copies of the card do you make for added entries ?
11 What parts of the imprint items do you omit in the added entry ?
12 What parts of the collation items do you omit in the added entry ?
13 How do you arrange the catalog cards ?

14 What filing code do you follow ?
15 By what method do you reproduce the catalog card ?
16 From what sources do you get the printed catalog card ?
17 What kind of library equipments do you use ?
18 What kind of classification scheme do you use ?
19 What kind of book numbers do you use ?
20 What subject heading list do you use if you have the dictionary catalog or the separate subject catalog

1 Library Collection

All of the library's holdings by each type of material is shown in Table 81 The average number of books owned by the libraries surveyed was approximately 115,000 volumes The percentage of foreign books was more than 3 1 per cent of the whole collection

Table 84 shows the percentage of the library holdings by subjects according to the main classes of the Nippon Decimal Classification Fiction was usually in "literature against the method of the American libraries "

The average number of books added during the year of 1957 was approximately 6,000 volumes per one library

2 Organization of the Libraries

The overall pictures as to the size of cataloging staff, as reported by fifty libraries is presented in Table 85

The proportion of catalogers to the rest of the staff runs very high, as compared with that in the American public libraries, because there are involved a great deal of handwriting works in cataloging in many libraries, as shown in Table 897

The proportion of non-professional to professional assistants in a catalog department is one to one, while the ratio of professional to subprofessional assistants is four to one

Nine libraries answered to have staff manuals of cataloging process for the use of training of new assistants

3 Form of Catalogs

The standard size of catalog cards roughly 3 × 5 inches was reported to be used in almost all the libraries

Thirty four libraries answered to have the classed catalogs. It shows the largest percentage of the libraries surveyed, approximately 68 per cent This is due to the fact that Japanese librarians prefer the classed catalogs to the dictionary catalogs, because the Chinese character of the headings is unsuitable for filing the cards alphabetically. Therefore, there are many libraries which have the classed catalogs with the alphabetic indexes lacking

The title catalogs rank second which are used in the twenty-six libraries The author catalogs which are used in the twenty libraries come next As shown in Table 87, there are only seven libraries which have the dictionary catalogs, and the divided catalogs are used in a few libraries

It is usual in Japanese libraries that the card catalogs are divided in two groups, one for Japanese books and the other for foreign books

For foreign books, the classed catalogs are used in the twenty four libraries

Owing to the influence of the American libraries, the author-title catalogs are used in the five libraries, instead of filing author and title cards separately

As the official catalogs, the classed catalogs are used in twenty seven libraries

The other catalogs (Author, title catalogs) are used in the twenty libraries Six libraries answered to have the classed catalogs in book form

For foreign books, the classed catalogs are used in the eighteen libraries, as shown in Table 881

31 Catalog Code

All our printed catalog codes which appeared after 1942, provided rules for author entires In our country, it is usual in the Japanese libraries that the *Anglo American code* and the *Library of Congress's rules for description cataloging* are used for cataloging foreign books, while the 1942 edition of the *Nippon catalog rules*, based on the 1908 edition of the *Anglo-American code* are used for cataloging Japanese and Chinese books

The *Nippon catalog rules* were first published by the Young Librarian Association in 1942 After the National Diet Library was established in 1948, the Rules were revised by the Japan Library Association, as the 1952 edition

Of fifty libraries replying to our questionnaire, fourty-five libraries are using the 1952 edition of the *Nippon catalog rules* However, two libraries use the 1942 edition of the *Nippon catalog rules* Three libraries reported to use their own codes

For the cataloging of foreign books, the 1949 edition of the *Anglo-American code* is used by nine libraries, but the *Library of Congress's rules for descriptive cataloging* are used only by two libraries

32 Limitation of Added Entry Cards

Reduction in the number of added entry cards to be made is a recommended form of cataloging economy, as shown in Table 892 Title cards, showing the greatest number of use, are made in forty-two libraries. Joint author cards which are made in thirty-seven libraries rank second Translator cards which are made in thirty four libraries come third

The value of analytical cards in making the most of limited book sources has frequently been pointed out Analyticals are made by thirty six libraries.

33 Descriptive Details on Cards

Although there is a tendency to omit or to simplify the imprint items in the small libraries, thirty four libraries answered the question to give all the items on cards, as shown in Table 893

As the place of publication is the most frequently omitted item, it was omitted in eleven libraries Many catalogers in our country are in the habit of giving meticulously full entries to every book received, although most of the books are on open access and a large proportion of current accessions are temporary publications

Nine libraries answered the question to omit the place, when the place of publication is Tokyo No libraries answering the question omit the imprint entirely

About three libraries or six per cent of the libraries surveyed omit illustration and an equal number of libraries omit pagings or volumes

Only two libraries answered the question to omit the size However, forty-two libraries answered the question to give all the items of collation

34 Filing Rules

For the filing of catalog cards for the Japanese and Chinese books, either the filing rule of the National Diet Library or the filing rule of the Japan Library Association is used in every library It is obvious that these rules have been influenced to a large extent by the principles laid down by the ALA rules for filing catalog cards As shown in Table 895, the former is used in three libraries or 8 per cent of the libraries surveyed and the latter is used in eighteen libraries or 36 per cent of the libraries surveyed 2 per cent of the libraries surveyed answered the question to use the ALA rules for filing catalog cards

Either Roman alphabet or Japanese syllabary is added to the Chinese characters by which the headings are represented on the catalog cards for the sake of filing

There are two systems for Romanization of Japanese, i e the Hepburn system and the Kunrei system (Instructions from the Japanese Government) The former is used in ten libraries and the latter in three libraries

Japanese syllabary is written by Kana or Hiragana The former is used in thirty-four libraries and the latter in five libraries

35 Methods of Producing Entries

The use of the same form of cards for both main and added entries is recommended as it saves catalogers' time

However, handwritten cards are used in thrity-five libraries or 70 per cent of the libraries Typewritten cards were used only in three libraries Thirty-two libraries cut the catalog entry directly on a stencil to produce necessary copies of a card

Typewriter is used more commonly for the cataloging of books in foreign languages In this case, typewritten card is used in eighteen libraries, while handwritten cards in sixteen libraries There are no libraries which use reproduction machine for duplicating catalog cards.

36 Use of the Unit Card

We have the printed cards of the National Diet Library and the mimeographed cards of the Japan Library Association which are supplied upon request to the libraries

The delay in receiving cards from the National Diet Library is one of the important reasons why only a small number of the libraries use the N D L cards

The printed cards of the N D L were used in six libraries and the mimeographed cards of the JLA in seven libraries The former are made for all the Japanese books which the NDL acquires as a legal deposit The latter are made only for 3911 titles of the books appraised by the JLA during the year of 1956

Home-made cards are used by twenty eight libraries, some of which distribute these cards to their branches or other libraries beside their own use, as shown in Table 8991

4 Library Equipments

The total of the library equipments with which fifty libraries have been furnished are as follows

Cabinets of twelve drawers units	42
Cabinets of fifty drawers units	200
Cabinets of other drawers units	786
Card sorters	65
FM system mimeographs	53
Other mimeographs	21
Japanese typewriters	14
Japanese Syllabary typewriters	2
Book trucks	20
Microreaders	18
Romanized typewriters	30

The duplicating of cards may be done by various methods The machine most commonly used in Japanese libraries to reproduce their cards simply and economically is the FM system mimeograph

The Dexigraph and the photostat are not used for the reproduction of cards.

5 Classification Tables

Table 8993 shows the classification schemes used by the libraries surveyed.

For the Japanese books, the 6th edition of the *Nippon Decimal Classification* (NDC) is used in forty-four libraries or 88 per cent of the libraries

The first edition of NDC was published in 1929, which was evolved for the use of Japanese libraries by Mr Kiyoshi Mori on the basis of the Dewey's Decimal Classification.

Since the new and revised 6th edition appeared in 1950, it has been revised by the Classification Committee of the Japan Library Association

It is also shown that five libraries are using the earlier editions with expansions made to serve their own needs

On the other hand, four of the libraries replying to this questionnaire still use local schemes They will continue to do so since their collections are too large to make reclassification feasible

For the foreign books, the 15th edition of the Dewey's Decimal Classification is used in four libraries

51 BOOK NUMBERS

The book number, if given fully, consists of the initial letter of the author's surname and one or more figures or letter to distinguish an individual book from all others within the same class number The figures following the initial of the surname are usually taken from one of the tables prepared by C A Cutter.

In our country, the Mori's Author Tables, instead of the Cutter' alphabetic Author Tables, are used in libraries

But the initial of the author's surname is used by nearly 34 per cent of the libraries However, numerical symbols (Accession number in the same class number) are used in 50 per cent of the libraries

6 Subject Headings List

As Table 87 shows the public catalogs used by the libraries surveyed, there are very few libraries which have dictionary catalogs or separate subject catalogs in Japan

Therefore, Basic Subject Headings (BSH), which are based on the *Sear's list of subject headings*, are used in no more than thirteen libraries, while the *Nippon subject Headings* were compiled by the Young Librarian Association in 1944, are used only in seven libraries

7 Summary

There are involved a great deal of handwriting works in cataloging in the libraries in Japan. Therefore, the proportion of cataloging staff to the rest of the library staff runs very high

The reason lies in that the use of the printed cards of the NDL is not popular for some reason or other and the library budget is too poor to bring mechanization in cataloging Moreover, it seems to me that there is the secret resistance of the catalogers against the use of printed cards or new methods of producing entries

In conclusion, the author wishes to express his hearty thanks to Mr Masao Yoshida of the National Diet Library, who kindly read the paper thoroughly and has given many kind advices

8 TABLES

81 LIBRARY COLLECTION

Book stock	
(a) Mixed Japanese and foreign books	1,104,965
(b) Japanese books (forty libraries)	4,430,084
(c) Foreign books (do)	187,640
	5,722,689
Bound periodicals	42,061
Bound newspapers	23,941
Pamphlets	12,132
Phonograph records	13,698
Films	10,489
Microfilm	25,103
Lantern slide	2,079
Paper drama (Japanese "Kami shibai")	105

82 ANNUAL ADDITION (THE YEAR OF 1956-57)

Mixed Japanese and foreign books		35,706
Japanese books		254,008
Foreign books		9,523
	Total	299,237

83 UNFINISHED BOOKS OF CATALOGING

	Japanese books	*Foreign books*
1957	18,069	46
1956	165,008	18,605

84 PERCENTAGE OF THE LIBRARY HOLDINGS BY SUBJECTS

The percentage of the library holdings by subjects according to the Main Classes of the Nippon Decimal Classification

Class	*Per cent*
0 (General works)	9 5
1 (Philosophy)	6 3
2 (History)	10 7
3 (Social Science)	14 34
4 (Natural Science)	6 25
5 (Engineering)	4 53
6 (Industry)	5 26
7 (Fine arts)	5 27
8 (Philology)	2 1
9 (Literature)	37 64

85 PERSONNEL

		Per cent
Professional	516	40 5
Subprofessional	130	10 5
Non-professional	627	49
	1,273	

86 STAFF MANUAL

Number of libraries using them	9
Number of libraries not having them	41

87 PUBLIC CATALOGS FOR THE JAPANESE AND CHINESE BOOKS

	Card form	*Book form*	*Other form*
Author catalog	20 (7)*	2 (1)	
Title catalog	26 (9)*	2 (1)*	
Author and title catalog	6 (1)*		
Subject catalog	8 (3)*		
Dictionary catalog	7 (2)*		
Classed catalog	34 (12)*	10 (1)*	1

871 PUBLIC CATALOGS FOR THE FOREIGN BOOKS

	Card form	*Book form*	*Other form*
Author catalog	15	1	
Title catalog	7		
Author and title catalog	5		
Subject catalog	0		
Dictionary catalog	1		
Classed catalog	24	3	

88 OFFICIAL CATALOGS FOR THE JAPANESE AND CHINESE BOOKS

	Card form	*Book form*	*Other form*
Classed catalog	27 (9)*	6 (3)*	
Other form of catalog	22 (4)*		

881 OFFICIAL CATALOGS FOR THE FOREIGN BOOKS

	Card form	*Book form*	*Other form*
Classed catalog	18	6	
Other form of catalog	10		

*These catalogs show the number of libraries where cards for the Japanese and Chinese books and foreign books are filed together in one alphabetical arrangement

891 CATALOGING RULES

	Number of libraries using them
Nippon Catalog Rules, 1952 edition	45
Nippon Catalog Rules, 1942 edition	2
*Anglo-American Code, 1908 edition	1
*ALA Rules, 1949 edition	9
*L C Descriptive cataloging rules	2
Other rules	3

*These rules are used only for the cataloging of books in foreign languages

892 ADDED ENTRY CARDS

	Number of libraries making them
Title entry	42
Subject entry	21
Editor entry	36
Joint author entry	37
Translator entry	34
Series entry	29
Illustrator entry	5
Analytical entry	36

893 IMPRINT ITEMS

All items omitted	0
Place items omitted	11
Place and publisher omitted	1
Publisher omitted	2
Date omitted	0
All items given	34
Place omitted only when it is Tokyo	9

894 COLLATION ITEMS

Collation items omitted	0
Size omitted	2
Illustration omitted	3
Paging or volume omitted	3
All items given	42

895 FILING OF CATALOG CARDS RULES

	Number of libraries using them
Filing rules of the Dictionary catalog card of the National Diet Library	3
Filing rules of the Japan Library Association	18
*ALA rules for filing catalog cards	1
Own filing rules	15

*This rule is used only for the filing of books in foreign languages

896 DETAILS OF ARRANGEMENT

Alphabetic arrangement	*Number of libraries using them*
Kunrei system	3
Hepburn system	10
Japanese syllabary arrangement	*Number of libraries*
Kana	34
Hiragana	5

897 REPRODUCTION OF THE CATALOG CARDS

	Japanese books
Handwritten	35
Typewritten	3
Mimeographed	32
	Foreign books
Handwritten	16
Typewritten	18
Mimeographed	8

898 USE OF THE UNIT CARDS

	Number of libraries using them
NDL printed card	6
Mimeographed card of the JLA	7
Home-made mimeographed cards	28

8991 DISTRIBUTION OF THE HOME-MADE CARDS

Branches	3
City library	1
Town library	1

8992 EQUIPMENTS FOR CATALOGING

Card cabinets	
12 trays	42
15 trays	200
other trays	786
Card sorters	65
FM system mimeographs	53
Other mimeographs	21
Japanese typewriters	14
Roman typewriters	30
Japanese syllabary typewriters	2
Book trucks	20
Microreaders	18

8993 CLASSIFICATION TABLES

	Number of libraries using them
The 6th edition of NDC	44
The 5th edition of NDC	3
The 4th Edition of NDC	1
The 3rd edition of NDC	1
The 15th edition of DC	4
Other classification tables	4

8994 BOOK NUMBER

Kiyoshi Mori's author tables	7
NDL author table	0
Other author tables	6
Initial of author surname	17
Accession number in the same class number	25
Other book numbers	7

8995 SUBJECT HEADING LIST

	Number of libraries using them
Nippon subject headings list (NSH)	7
Basic subject headings (BSH)	13
Others	5

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CHAPTER F3

Simplified Practice of Cataloguing

KOICHI T MORI

1 Main Entry

WHEN Mr Lubetzky's preliminary report on the study of *ALA cataloging rules* was circulated to the library profession in the United States for study and comment, one of the correspondents raised a question on main entry as follows: "I submit that as far as the function of the catalogue and its usefulness to the reader are concerned, it may make very little difference, perhaps none at all, which name is chosen as the main entry and which as an added entry. . . . What is really the purpose and significance of the *main* entry. As such to both the cataloguer and the reader ? Does it make such a difference to either which entry is chosen as the *main* entry, as long as the important alternative entries are also made ? If less sanctity were attached to the main entry, what effects would be noticeable in the processes of making and using the catalogue ?"[1] A similar question was presented by several Japanese cataloguers including the writer of this paper and in recent years there has been a controversy concerning the necessity of main entry in this country. This paper is to make a short review on the proposition that the omission of main entry will simplify our cataloguing rules and practice and to clarify the limit of this proposition.

2 Definition of Main Entry

ALA glossary of library terms defines the main entry[1] as "a full catalog entry giving all the information necessary to the complete identification of a work"; and[2] as the entry which "bears also the tracing of all the other headings under which the work in question is entered." The editor of the second edition of the *A L A cataloging rules for author and title entries* states in its introduction:

> "Added entries provide alternative means of approach to help those who lack complete knowledge of a specific work desired . . . to enable them to reach quickly the heading chosen as the main entry."

However, when all the necessary entries for a dictionary catalogue (or, any other kind of catalogue composed of multiple entries) are made by the use of unit card, the above cited definition cannot characterise the main entry. The reasons for this are as follows:

1 Not only the main entry, but all the added entries also bear exactly the same amount of information of the work catalogued, in consequence of the adoption of unit card Therefore, the added entries are also the full entries. In spite of the statement by the editor of A L A Rules, catalogue users are not requested to consult the main entry to obtain the full information of a specific work

2 The tracing of all the added headings can be found on any card when the printed cards are used The entry that bears the tracing is not only the main entry

A L A definition of main entry is no longer practical in these days Since any catalogue entry can give the same amount of information to the users, all the entries filed in the public catalogue are equivalent, either the entry is main or the added one As far as the multiple-entry catalogue is compiled and used by the readers, it makes no difference, which one is chosen as the main entry In other words, it is of no significance to assign the main entry

In several libraries in Japan—Kyoto Prefectural Library, Osaka City Library, Tokushima Prefectural Library, Wakayama Medical College Library, Wakayama Prefectural Library, etc—, the catalogue cards are now being made and filed into the catalogue without assigning the main entry

3 **Omission of Main Entry Heading**

The small and medium-sized libraries in Japan are usually compiling only two kinds of catalogue 1 shelf list, mainly for official use, and 2 dictionary catalogue, or individual catalogues (i e author catalogue, title catalogue and subject catalogue) for public use The shelf list can be compiled irrespective of the heading for main entry, since the shelf list cards are arranged according to the call numbers they bear So the shelf list card is not required to be a copy of the main entry

In several Japanese libraries mentioned above, the entries to be filed in a multiple-entry catalogue are now produced carrying only the descriptive part of the entry as follows

> Elements of American Government, by John H Ferguson and Dean E McHenry New York, McGraw-Hill, 1950.
>
> x, 803 p. 24 cm
>
> 1 U S—Politics and Government. I Ferguson, John J II McHenry, Dean E. III Title.

31 CARD 1 [BASIC CARD]

This basic card serves as unit card and is reproduced by mimeograph as many as the catalogue system of the library requires The author cards are made by adding the author heading at the top of basic card as follows

Ferguson, John H
Element of American government, by John H
Ferguson and Dean E McHenry New York, McGraw-Hill, 1950
x, 803 p 24 cm

32 CARD 2 [AUTHOR ENTRY]

McHenry, Dean E
Elements of American government, by John H
Ferguson and Dean E McHenry New York, McGraw-Hill, 1950
x, 803 p 24 cm

33 CARD 3 [AUTHOR ENTRY]

In the traditional practice based upon the main entry principle, the added entry is made by adding the added heading at the top of main entry card as follows

McHenry, Dean E
Ferguson, John H
Elements of American government, by John H
Ferguson and Dean E McHenry New York, McGraw-Hill, 1950
x, 803 p 24 cm
1 U S —Politics and Government. I McHenry,
Dean E jt auth II Title

34 CARD 4 [ADDED AUTHOR ENTRY ACCORDING TO THE TRADITIONAL METHOD]

Rule 25 of *A L A rules for filing catalog cards* prescribes the arrangement under author as follows

1 Arrange in one file all the entries, both main and secondary, for a person as author, joint author, compiler, editor, illustrator, translator and general added entry Subarrange alphabetically by the title of the book

2 In interfiling the secondary author entries with the main author entries, disregard the main author heading on the secondary entry cards and subarrange by title To make this clear, underline the word in the title by which the entry is subarranged, or line out the main entry heading

As far as this rule is accorded, it is of no significance to place the main author heading at the head of title, because this principal author's name is disregarded to file the added entry cards Even if we consider it necessary to show the catalogue users which name is chosen as main entry, it can be simply done by indicating the main entry heading in the part of note or by listing it as one of the items belonging to the tracing According to the investigation made by Mr Y Fujita, Kyoto Prefectural Library, it has been found that about 33% of books published in Japan are the works of joint authorship or the translations, for which the main author heading on the secondary author cards is meaningless for filing them

A copy of Card I will be used as title entry card if the title entry is regarded necessary to make for the work catalogued At the top of basic card may be typewritten the filing title, when it is a part of or different from the title itself

Tom Sawyer
The adventures of Tom Sawyer, by Mark Twain

35 CARD 5 [ADDITION OF FILING TITLE]

Subject entry will be made by adding the subject heading and secondary filing medium If the cards having the same subject heading are to be subarranged by author, subject heading and the author of the work will be added at the top of basic card

Geography Huntington, E
Principles of human geography, by Ellswroth Huntington
6th ed rev by Earl B. Shaw New York, John Wiley, 1951

36 CARD 6 [SUBJECT CARD WITH AUTHOR]

Since the catalogue users have generally a little knowledge of particular works in the case of subject approach, it does not help the users' search to subarrange subject entries by author A certain means of subarrangement other than by author is recommended among the entries having the same subject heading, e g reversely chronological arrangement by the date of publication In order to adopt this arrangement, it will make the filing work easier and faster to give the date of publication or the time number based on the date of publication as the second part of filing medium (we call this 'the secondary heading') following the subject heading

Biology. 1949
Survey of biological progress, vol 1. George S. Avery, Jr ,
editor-in-chief New York, Academic press, 1949

37 CARD 7 [SUBJECT CARD WITH THE DATE OF PUBLICATION]

The secondary heading '1949' may be substituted by 'H9' which is the Ranganathan's time number for 1949

4 Advantages of New Practice

If we can exclude the main entry from our daily cataloguing procedure, as Mr Lubetzky recognizes "omission of the rules relating to the choice of entry would simplify considerably our cataloging rules and, thereby also our cataloging practice" [2]

Time needed to make an entry for 30 books by two methods are shown on Table 1 This is the result of tests made at Kyoto Prefectural Library in 1955 [3]

TABLE I

		*Cataloguer**		
		A	B	C
I	Time Needed to Make 30 Main Entries (min)	353	285	172
II	Time Needed to Make 30 Basic Cards (min)	216	220	139
III	Difference I—II	137	65	33
	Ratio III 1	39%	23%	19%

*Cataloguer A took 2 months' course in library service and her experiences in library are 1 year in charge of serial acquisition and 1 month preceding the test as an assistant cataloguer Cataloguer B is a graduate from the School of Librarianship, Kyoto University and his experience is 2 years as cataloguer Cataloguer C received 4 months' training in service and her experience as cataloguer reaches 5 years

In Table 1, difference I-II means nearly the time needed for the choice of main entry heading, which reaches to 20-40% of the time required to make a whole main entry The time needed for the choice of main entry heading by cataloguer A is 137 minutes which is about 4 times of the time needed by cataloguer C But the time needed for completing the description of a work by cataloguer A is only one and a half times of that by trained cataloguer Mr Fujita concluded from these data that choice of main entry requires a great deal of skill and experience Table 2 illustrates the number of entries which can be made within an hour by two methods

TABLE 2

	Cataloguer		
	A	B	C
Main Entry Card	5 1	6 3	10 5
Basic card	8 3	8 2	12 9

4 When is the Main Entry Necessary ?

In reply to the question raised by a correspondent, Mr Lubetzky states, "the main entry was the one indispensable entry and was to be given in full, whereas the others were auxiliary entries and could be abbreviated or entirely omitted," and then "the contents of a serial is kept up only on the main entry" and for contents the see reference from the added entries will be made to the main entry From such a reason, Mr Lubetzky insists that the main entry is indispensable Even when this is agreed true, it is not required to show the main entry heading at the top of unit card In order to make the users refer to main entry, it is sufficient to indicate the main entry heading as an item of tracing This is also true when all the editions of a work are listed only under the main entry to which the users are referred from the added entries

In printed catalogues, consideration of economy in the cost of production impose the restriction on the entries to be included, i e one entry for a work is desirable It is the same with union catalogues Printed catalogues and union catalogues are usually compiled only by the large reference libraries, college and university libraries, and special libraries or by their associations Small and medium-sized public libraries and school libraries will not make the printed catalogue or union catalogue for their general collection, most of which are current and popular books accessible in any libraries In these libraries where the printed catalogue or union catalogue is not compiled, choice of main entry is an unnecessary procedure and the cataloguing practice can be largely simplified by disregarding the main entry

Large reference libraries and research libraries must determine the main entry which will be the element of single entry catalogue However, it is not necessary to make the form of unit card similar to the main entry Inclusion of main entry heading into tracing is sufficient for the purpose Main entry can be made from the basic card by adding the heading relevant for it which may be selected according to the rules for printed catalogue or union catalogue.

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2. *Op cit*, 0 58
3. FUJITA Yoshikazu Practice of simplified cataloging based on the omission of main entry from the unit card In *Toshokan-kai* v 8 (1956), p 119-29 (in Japanese)

CHAPTER F4

Cataloguing and Classification of Books in Japan

SHUKO KATO

0 Importance of Education

The establishment of Meiji Government in 1868 was a dawn of new Japan. The new Government, realising that foundation of development of a nation lies on education of people, promulgated education system and directed so as not to be any uneducated people in villages and homes early in 1872. In about 90 years after then, the percentage of school attendance is reaching to over 98%.

As the education, however, mainly meant school education, except universities or colleges, the schools which had facility of library were rather exceptional. Naturally it can be hardly said that public library system in Japan was prosperous.

01 REFORM OF EDUCATIONAL SYSTEM

By the big educational system reform after the World War II, in 1947 it was provided for that every school must have a library, and together with the opening of the National Diet Library and the establishment of Japan Library Law, Japanese libraries are going to utterly change their entire aspects.

Under such a situation, it must be an interesting task to know how modern libraries came to change or to see how the dominant library techniques, cataloging and classification have been developed.

1 Leading Position of Imperial Library

It is generally said that Tokyo Shojakuhan (Tokyo House of Books or Tokyo Library) established in 1872 was the origin of modern Japanese Library. The administrative techniques of the library were following after the example of newly rising American library, and its president studied abroad in Harvard University. Tokyo Shojakuhan later changed its name succeedingly into such ones as Tokyo Library, Imperial Library and then into Ueno Library, and an only National Library and a center of public libraries in Japan and played a leading role until World War II started.

2 Japan Library Association and Cataloguing and Classification

In 1892, Nihon Bunko Kyokai (Japan Library Association) was organized Though the main purpose of the Association was to promote friendship among bibliographers in Tokyo, it gradually developed into a nation-wide organization of library people, and in 1907 changed its Japanese name as Nihon Toshokan Kyokai (Japan Library Association, hereafter this shall be called JLA) and has come down to the present

It might have been quite a worth noticing event that Nihon Bunko Kyokai has set the compiling of cataloging rules as the first program on the day of the inaugural meeting As the result of this, for the first time in 1893, the next year, The First Cataloging Rules for Japanese and Chinese Books (Dai 1-ji Wakansho Mokuroku Hensan Kisoku) was enacted As this 'Rules' was a very simple one consisting of only 28 articles, it was revised to contain 32 articles in 1910

Though this 'Rules' was the one which took titles for main entries following after the tradition of Japan and China, it dominated Japanese cataloging field until around 1930

3 First Standard Classification Scheme

Due to such Wars as Sino-Japanese War of 1894-5, Russo-Japanese War of 1904-5 and the World War I of 1914-15 Self-confidence of Japanese people as a great nation developed gradually Though their contents were poor, the number of public library increased year after year Thus in 1918 the plan of establishing standard classification scheme occurred

In those days as circulation system of Japanese libraries was so called charging system, the shelving was in the fixed style and books were used according to the classified catalog which was in the light of classification scheme used by above mentioned Imperial Library Classification scheme of Imperial Library was following after Harris' Classification of U S which became a base for Dewey's D C and also after Manchester's classification scheme of English Librarian, Edwards' Now as the number of public libraries increased, classification for shelving became necessary

31 LAYOUT

The first classification scheme for shelving with the decimal number is said to be the classification system of Kyoto Prefectural Library of 1898 and the one to give more influences to later libraries was that of Yamaguchi Library which was established in 1909 As the following chart shows, this classification is based on the classification of Imperial Library

Imperial Library Classification	*Yamaguchi Library Classification*
I Religion	0 General works
II Philosphy and Education	1 Religion and Philosophy
III Literature and Philology	2 Education
IV History, Biography, Geography and Travel	3 Literature and Philology
V Social Sciences	4 History, Biography, Geography and Travel
VI Natural Sciences	5 Social Sciences
VII Engineering, Military Science	6 Natural Sciences
Fine Arts	7 Engineering, Military Science
Industrial Arts	8 Fine Arts
VIII Generalia	9 Industrial Arts

Main classes of Yamaguchi Library Classification were approved by Prefectural Libraries' Conference in 1919 as standard classification But as the scheme was too simple, prefectural and municipal libraries which were established afterward had to revise it in various ways, and again it caused the confusion of classification scheme

4 **Library Training School**

In 1912, one year course library training school was established and afterwards this changed into that of two year course Due to the establishment of this training school academic interest in library science of Japan became very active and question of classification and cataloging came to be discussed as the most popular topic of articles of the then Library Journal

41 STUDY OF CLASSIFICATION

In study of classification scheme, firstly Richardson, Dewey's (DC), Cutter's (EC), Library of Congress', Brown's (SC) and various works of Sayers and then Bliss' Bibliographic system and Ranganathan's Colon Classification and his works were taken up

During these years, Kiyoshi Mori working hard in trying Japanization of Dewey's (DC) accomplished in 1929 what is so called Nihon Decimal Classification (NDC) Being based on the criticism against DC, NDC changed its arrangement of main classes from Dewey's, making full use of mnemonic features and became the most detailed classification Though some progressive library people had an opinion of making this a standard classification of Japan of new age, because of the opposition of some libraries which had grown up to some extent, such opinion was not actualized

The number of libraries, however, to use NDC gradually increased and also the training school came to use it and in 1942 the 5th edition was published It certainly made a great contribution to the classification scheme of Japan

42 Study of Cataloguing

On the other hand in the field of cataloging, being unable to be satisfied with the above mentioned simple cataloging, people had long been wishing the revision of it JLA for the 3rd time started the revision of cataloging Japanese and Chinese books and in 1932 they published the result of their work This cataloging consisting of 169 articles shows a remarkable progress compared to the above mentioned two cataloging rules But this still has some vague points in main entry Probably in Europe and America it would not be any problem to make an author a main entry But in Japan and China there was nothing strange in taking title for main entry since the ancient times But it has become clear that as long as people stand on all round point of view of cataloging, author must be a main entry Young librarians had to spend a lot of time for conquering the opinion of taking titles for main entry Thus in 1929 Young Librarian's Federation, setting up the cataloging committee, started the compiling of cataloging rules which takes author for main entry, and in 1943 'Nihon Catologing Rules (NCR)' was published Being consisted of 138 articles, additional rules and appendix, the NCR was an epoch making work which was to be used commonly both for Japanese and Chinese material and European materials But it also failed to get whole-hearted support of the library world just like NDC

The enthusiasm of young librarians who tried to mechanize the library work by using the unified classification and cataloging so as to be able to concentrate on serving activities was mercilessly trampled down

But at the same time we certainly experience how hard the reformation is when the development of library reached to a certain stage and solidified So we had to wait for some other time for the solution of the problem of unified classification and cataloging that was very important for the development of libraries in Japan

5 Classification after the Second World War

Though the World War II was the tragedy for Japanese people, it also cannot be denied that it gave us the very good chance to reflect upon our culture or tradition of the past

Right after the War, JLA organising classification committee and cataloging committee in 1945 for the purpose of instructing and giving advices to the libraries in the post-War period, engaged in the study Library advisers sent from U S A also strongly supported the progressive opinions of Japanese librarians

Firstly the problem of what should we do about classification in school of libraries under new education system was discussed As to the classification of Japanese and Chinese books, deciding to adopt Nihon Decimal Classification for the coordination with public libraries Japanese librarians started the revision of it and in 1950 newly revised 6th edition of NDC was published The National Diet Library which opened in 1948 also decided to adopt NDC for Japanese and Chinese books

So now the NDC came to be used by all librarians of Japan as standard classification scheme both nominally and virtually

6 Cataloguing of Post War Period

On the other hand, also in the field of cataloging, in 1949 cataloging committee of JLA started the revision and with reference to above mentioned NCR, cataloging rules of Japanese and Chinese books for Imperial Universities, ALA Codes, descriptive cataloging rules for L C or cataloging rules of Vatican etc in 1952 amended 'Nihon Cataloging Rules ' The 'Rules', containing 141 articles and taking author for main entry, came to put emphasis on the Japanese and Chinese books

Thus what we had been dreaming of for the past 30 years came true From now on we must try to develop library techniques along this line

61 CHANGE OF CATALOGUING SYSTEM

Next I must tell you about the cataloging system of libraries As stated before, most of Japanese libraries had been using manual charging system for circulation in the pre-War period So naturally it was common that shelving was fixed arrangement and two kinds of catalogs were furnished for the public The one was classified catalog according to title main entry and the other was title catalog The library which furnished author catalog was rather exceptional

While after the War, as almost all the libraries made an open access their general principle, sudden changes occurred in cataloging system, too, and now in libraries where mainly open access system is in practice, a dictionary catalog or subject catalog is drawing the most important attention

Subject catalog in Japan was started by Imperial Library in 1897, and Nihon Kenmei Hyomoku Hyo was published by this writer, and the revised edition was published in 1944 But being jostled by classified catalog, this failed to realize the anticipated result

To meet the new demand of the post-War period, during the period of 1953-54, 'Kenmei Hyomoku Hyo (Subject Heading List)' for elementary, junior high and senior high schools was published by Library Association, and in 1956 by JLA 'Kihon Kenmei Hyomoku Hyo (Basic subject Heading List)' was published So the way was opened before the subject catalog and dictionary catalog

62 Printed Card of the National Diet Library

The National Diet Library is publishing printed card since 1950 and is distributing them to those libraries that wish to acquire them through subscription This is following after the system of Library of Congress of U S A and cataloging scheme of this card is NCR and the classification follows NDC The subject heading system is NDL's own, and if this is adjusted with aforementioned Subject Heading List, it will be more useful for increasing the efficiency of library techniques

7 UDC and CC in Japan

In library schools in Japan, studies on Universal Decimal Classification and Colon Classification are beng carried on Being very much interested in lectures on classification since 1933 edition, I have been taking it up for the lecture on classification at Moubusho Library Training School I pay the greatest respect to the author's consistent theory shown in his work '*Five Laws of Library Science*' and specially by the energetic lectures the author gave in Tokyo last year

There are some librarians in Japan who are working on the further development of 'Phase-concept' So great hopes are entertained of future studies

8 CC to Flourish

But, to our great regret, as I said before, it is always difficult to thoroughly reform classification or cataloging system which freeze on a certain stage Nobody hesitates to give the loudest applauses for Colon Classification which is theoretically clear. But the practical problem of changing International bibliography which is developing by the UDC into CC, is making the concerned people hesitate ? I hope the day will come when the seed planted in the new field will overwhelm the whole world like the teachings Buddha gave under the Linden-tree

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CHAPTER G1

Ranganathan's Contribution to Subject Cataloguing

P K GARDE

1 Contributions on Cataloguing

RANGANATHAN's contribution to library cataloguing has adorned various facets of the subject. His *Classified catalogue code* (now in its fourth edition) and *Dictionary catalogue code* laid down the rules for preparing entries of a catalogue; the *Theory of library catalogue* deduced the normative principles which lie (or should lie) behind the entries; *Library catalogue: Fundamentals and procedure* provided a manual of practice to the students, and a manual of teaching method to the teachers of cataloguing, and incidentally furnished an incontrovertible basis for a comparison of the classified and dictionary forms of catalogue by cataloguing the same set of books and using codes of the same standard of thoroughness for both the forms; and *Heading and canons* made a rule-by-rule comparative study of five catalogue codes against a well-defined terminology and a clearly formulated set of normative principles. Many new rules have been added to the *Classified catalogue code* since it was first published in 1934, and the number of Canons has also increased since they were first set out in 1938. But the basic tenets in this corpus are so sound that even the passage of a quarter century has done nothing to prejudice them. Indeed, the views in recent scholarly literature on the subject run so close to his that Indian librarianship should be legitimately proud of his anticipation.

11 ASSESSMENT OF CONTRIBUTIONS

A proper assessment of Ranganathan's contribution to library cataloguing should proceed along two distinct lines: namely, his contribution to cataloguing as a subject retrieval technique, and his contribution to cataloguing as an instrument of locating specific material from the knowledge of any of its identifying factors other than the subject. It is the purpose of this paper to review briefly his contribution to the first of these aspects, and to point out some of the present-day corroborations of the propositions he has enunciated and the techniques he has perfected over these many years.

2 Deeper Function of a Catalogue

Paradoxically, his greatest contribution to the catalogue as an instrument of subject retrieval lies not in the field of cataloguing *per se*, but in the field of library classification To him, the most important function of the catalogue is subject retrieval He called it its "deeper function" To achieve it with the maximum efficiency, he was convinced that the catalogue has to take a bipartite, classified form, one part holding entries which are arranged in a classified file, exhibiting hierarchical order between subjects, and which give information about the library's resources on various subjects, the other part holding the complementary entries which are arranged in alphabetical sequence and which help in locating known, specific material If the classified form of catalogue was so unquestionably more efficient than any other in subject retrieval, how could one explain its almost total absence in the library world ? He attributed the tardiness in its emergence to the unavailability of a classification scheme which was capable of serving adequately as a base for the classified file of the catalogue The degree of efficiency of the classified file in literature searching is directly proportional to the ability of the classification scheme on which it is based to individualise specific subjects of any degree of intension whatever, and to arrange them in a helpful hierarchical order To achieve this, the classification scheme has to be of the synthetic, and not of the enumerative type This may sound as a truism today, but when Ranganathan first enunciated this proposition in the first edition of the *Classified catalogue code* (1934), some of his critics went to the extent of attributing a selfish motive to him and proclaimed that his ulterior aim in favouring the classified form of catalogue was to boast his own Colon Classification on which the Code was based It deserves to be brought to the notice of those critics that writing twenty-five years later, Jesse H Shera and Margaret Egan have almost echoed Ranganathan in the most unambiguous terms In the manual which resulted from the project initiated by the John Crear Library for a major re-appraisal of the classified catalogue, they say "A classified catalogue, however, demands of the classification on which it is based that it isolates specific subjects and synthesizes such subjects as does the dictionary catalogue with its alphabetic subject headings, for there must be no difference between the dictionary and the classified catalogue in the ability of each to isolate specific subjects This means that the classification system must provide coextensive class numbers for specific subjects just as the dictionary catalogue attempts to render them into specific subject headings To do this the classification system must be capable of development in such a way that it is able to describe a specific subject in terms of the notation just as readily as the dictionary catalogue can describe it in terms of verbal subject headings, and perhaps with even greater specificity. A synthetic classification is the only type of classification capable of meeting this requirement [1] Ranganathan's Colon Classification was the first such synthetic bibliothecal classification, with explicitly formulated rules as to the order in which different categories of classification were to be taken in constructing the class numbers It is noteworthy that Shera and Egan endorse even his sequence of arranging the fundamental categories of classification—personality, matter, energy, space and time By devising the first bibliothecal synthetic classification, Ranganathan has thus provided the catalogue with a foundation which enables it to realise its "deeper function" to its highest potential No contribution could be greater than this

3 **Chain Procedure**

But the Classified Part of the catalogue is far from self-operative Since the entries in that part are arranged by the notation of a classification scheme, they are inaccessible without a verbal key A subject index which gives the names of subjects and refers to their class numbers is therefore a *sine qua non* of a classified catalogue In providing alphabetical points of entry to the Classified Part of the catalogue, Ranganathan has made an equally great contribution to cataloguing technique by formulating the Chain Procedure But he arrived at its present development via a rather tortuous route The synthetic nature of the Colon Classification afforded a most tempting opportunity to emphasise the economy in the number of subject index entries which was possible to achieve in the classified form as against the dictionary form, and he exploited it by prescribing alphabetical index entries only for the "fundamental constituent terms" and not for the "derived composite terms" In effect, it amounted to the index part of the Colon Classification, as it was in its 1934 edition, being transferred on cards to the alphabetical part of the catalogue There can be no question that constructing a class number for a composite term by consulting several "characteristic index" entries was a task from which even the most assiduous enquirer would have flinched But Ranganathan winked at this objection by asserting that enquirers did learn, after a little initiation, how to construct class numbers for composite terms, and, in any event, the reference staff was always on the floor to help them out But by the time when the second edition of the *Classifed catalogue code* came out (1945), he had come to appreciate that the economy in the size of the subject index was being achieved at the cost of convenience in consulting the catalogue, and even its intelligibility was perhaps suffering in the process A set of alternative rules for subject index entries by Chain Procedure was therefore given in that edition The resulting subject index still preserved the economy in its size, although to a much lesser extent than before, but its intelligibility was greatly enhanced

31 ANALYSIS OF CHAIN PROCEDURE

Over the last fifteen years, the Chain Procedure has been considerably amended and improved The fourth edition of the *Classified catalogue code* (1958) contains a special terminology of the Chain Procedure, and ties it up with the special terminology of a synthetic classification It is a fitting tribute to its superiority over other techniques of subject indexing that the *British national bibliography* employs it in preparing its subject index Based on the experience gained in subject cataloguing for the B N B, E J Coates has produced a most thorough-going work on the structure of, and headings in, subject catalogues He has devoted two chapters to a detailed analysis of the Chain Procedure, and has this to say about it "Chain Procedure indexing, reflecting the modulated structure of the classification scheme, tends to represent complex ideas by means of elementary combined terms, rather than by single complex terms because of this, the coverage of subject relationship signalled by a classified catalogue supported by collocation of terms in the Chain Procedure index is probably greater than that produced by any alternative method of indexing

Its importance lies in the fact that it is the first systematic procedure laid down for subject indexing It is nearly, though not always, mechanical in its method of working It scores heavily over earlier practices on grounds of economy It provides entry word approach through a combined system of generic and specific entries, but it has the disadvantage that the components in its compound subject entries are not given in the order in which most enquirers will think of them"[2]

32 Enumerative Classification and Chain Procedure

It should be remembered that the B N B uses the Decimal Classification for classifying its entries But although the Chain Procedure was formulated specifically for a synthetic scheme of classification like the Colon, it not only proved admirably workable with an enumerative scheme like the Decimal Classification which is structurally much faulty too, but in addition it proffered administrative advantages which enabled the B N B to process a large volume of material within the brief interval between the publication of its weekly issues Coates says, " Chain Procedure sets a pattern for subject indexing method which disposed of the need for individual determination of every vexatious question of component order and permutation The chief cataloguer was thus free to attend to those residual questions which cannot be resolved by any rule or pattern of practice An important incidental advantage of Chain Procedure was that subordinate staff could be instructed very rapidly, and once familiar with the method, they had the satisfaction of working to a plan which they could understand rather than to the inscrutable edicts of some one in authority "[3]

4 **Ranganathan's Contribution**

This is an age when mechanical and electronic methods of high-speed information retrieval are being experimentally explored But it would be reasonably safe to assume that for a vast majority of people, the traditional, non-mechanised card catalogue would continue to be the major tool of access to a library's resources during the foreseeable future. Till then, the classified catalogue would be the most efficient tool for retrieval through the subject approach. And to-date, Ranganathan has done more than most others to maximize the efficiency of that tool.

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3. *Ibid*, p 120.

CHAPTER G2

Symbiosis between Classification and Catalogue

G R PARKHI

Contractions used:

BNB = British National Bibliography
CC = Colon Classification
DC = Decimal Classification
UDC = Universal Decimal Classification

1 Purpose of Classification

CLASSIFICATION is one of the conventional methods for retrieving documents. Without classification it is impossible to locate a particular publication from a large number of documents. The main purpose of classification according to Ranganathan are [R1]:

1 Storage of information in helpful sequence;
2 Retrieval on demand or in anticipation of information expeditiously, exhaustively and pin-pointedly without the admixture of any irrelevant information;
3 Balanced selection of books and other reading materials for a library in close correlation to the interests of its clientele;
4 Formation of special topical sequences in the library to meet the needs of particular groups of readers exactly, exhaustively and without loss of readers' time and tempo.

2 Purpose of Catalogue

Some of the main purposes of a catalogue are [C1]:

1 Catalogue serves as a tool to find the documents of which author, title, or subject is known;
2 It discloses to the readers what the library has by a given author, a given subject, under a given series, and so on;
3 It assists in the choice of a book as to its edition and to its character.

21 DEEPER FUNCTION

When a reader comes with a subject, his requirement will be better served if the catalogue can spread before him a complete display of all the materials on his specific subject and all its subdivisions This is accomplished by maintaining a classified catalogue, which consists of a classified part and an alphabetical part A reader can first look up his subject of interest in the alphabetical part, which in turn directs him to the classified part, where he will find in a filiatory sequence all the entries on the specific subject of his interest. He will also be able to know other related documents on either side of his subject of interest This is according to Ranganathan [R3] the deeper function of a catalogue

3 Classification and Catalogue-Compliments to each other

It is helpful to classify and arrange publications in a library by subjects To mechanise this helpful sequence certain code numbers are to be allotted to those publications The method of giving code numbers depends on what classification scheme is followed Readers cannot be expected to know this artificial language of classification and therefore there must be some means to indicate the existence of publications in a natural language Catalogue does this job However best be the scheme of classification used, it will be of no avail to the reader, if it is not backed by a catalogue

According to Ranganathan [R5] "It is helpful if the classified arrangement of books on the shelves is paralleled by the library catalogue In the case of a classified catalogue, a class index entry directs the reader to look up the classified part of it for his topic of interest and related topics or the shelves themselves" This shows how classification and cataloguing serve as complements of each other

4 Symbiosis

Symbiosis means "the living together in more or less intimate association or even close union of two dissimilar organisms"

Classification and cataloguing are the discipline for organising the documents in a library

"It is not advisable to attempt to do everything by following only one discipline To improve the efficiency of each discipline, something which can be better done by one should be left to it Monopoly is as dangerous among discipline as among industrialists This is why the holistic symbiosis should be preferred" [R7]

To make these two discipline live together in an intimate association, a tool, known as Chain Procedure, is formulated. The Chain Procedure is defined as "the standardised procedure whereby the successive terms in a chain of classes are transformed into headings for an alphabetical index" [V1] It has gained a world-wide popularity in the field of document retrieval BNB [W1] started applying Chain Procedure even as early as 1951 for arranging entries in a systematic way and found this technique very advantageous

41 CHAIN PROCEDURE

411 A MECHANICAL DEVICE

Chain Procedure is a mechanical device to derive subject headings from the artificial language of classification to the natural language

The reults [R4] for deriving the headings by Chain Procedure and choice of the headings, got by Chain Procedure are summarised as stated below

The first link of the chain starts with the first digit of a class number under consideration Further links are formed by going further, digit by digit, till the whole class number is represented at the last link of the chain If the link ends with a connecting symbol, or a signature symbol, or in most cases a chronological number of two digits, that link is called a false link There can be unsought links in the chain Unsought link depends upon the library, which may define it in the light of the reading material organised, the interest of the readers served and the nature of the service attempted All those links which are neither false nor unsought, that is significant links, are to be used for giving subject headings in the class index entry of the alphabetical part of the classified catalogue The example given below illustrates how subject headings are derived from class numbers automatically by the Chain Procedure

L	Medicine
L4	,, of respiratory system
L43	,, of trachea
L43	(false link)
L43 4	Disease of trachea
L43 42	Infectious disease of trachea
L43 424	Baceteria infection of trachea
L43 4241	Diphtheria

Whichever heading from the link used as class index entry in the alphabetical part is sought, it will direct a reader to the corresponding class number in the classified part, where the reader will also find documents on other subjects from the same link ie related topics

412 MEANS OF RETRIEVAL

Documentation consists of [R6] 1 organising the documents and their entries in a bibliography, catalogue, or other similar list; and 2 their retrieval when needed.

The class index entries by Chain Procedure put a reader readily in possession of all the class numbers to be looked up in a particular retrieval

413 ELIMINATING DEPENDENCE ON FLAIR

Cataloguer has to derive subject headings by taking into consideration the terms, under which readers are likely to look up This way of giving subject headings may not help much in the sense that the headings may not be pin-pointed On the other hand, Chain Procedure can derive automatically the subject headings, pin-pointedly The flair of a cataloguer is eliminated In this respect, it is pointed out "However perfect may be the effectiveness of arrangement in the classified part of the catalogue, it is rendered nugatory to the worker if the class index entries in the alphabetical part have been rendered ineffective by the whims of flair To eliminate this dependence on flair, Chain Procedure is developed" [K1] For the effective working of the Chain Procedure, it is necessary

1 to have a detailed scheme of library classification so that even subjects of narrow extension can be individualised, and
2 that a classification scheme must use standard terms

414 SUBJECT HEADING—A NEVER FAILING KEY

It is stated previously that class numbers are in an artificial language of classification, which is not intelligible to readers The Chain Procedure helps in giving subject headings in a natural language in the alphabetical part and a reader is directed to his area of interest in the classified part of the catalogue The Chain Procedure reproduces in natural language every possible term likely to be thought of and asked for by a reader The subject headings thus serve a never-failing key [R2] to the classified part of the catalogue

415 SUBJECT APPROACH

4151 *UDC*

One subject can have equal importance from more than one approach For example, take a subject "Myxogasters Italy" According to UDC, this subject will have a class number.

582 243 581 9 (45)

This is one way of approaching a subject But there may be some readers, interested in Italian flora In this case, then, the above number can be reversed and we can see that books will be automatically arranged under Italian flora, thus

581 9 (45) 582 243

The way of approaching a subject as stated above may be advantageous, but this should only be left in the idea plane On notational plane, the idea of UDC will fail, as there cannot be any uniformity in allotting class numbers and ultimately there will be chaos

4152 *CC*

"Colon Classification gives the advantages of double approach to readers by an alliance with the catalogue Classification arranges material according to one approach This corresponds to the facet formula The alphabetical part of the classified catalogue takes care of the second approach Chain procedure makes this alliance between classification and catalogue produce the required result without any fault " [R7]

416 EFFICIENCY

The greater the individualising capacity, expressiveness, versatality of a scheme of classification, the more efficient becomes the Chain Procedure DC fails in this respect [P1] On the other hand, CC admits full exploitation of the Chain Procedure This is demonstrated in the example given below

Subject	*DC*	*CC*
Medicine	616	L
,, of the respiratory system		L4
,, of trachea		L43
Disease of trachea		L43 4
Infectious disease of trachea		L43 42
(Communicable and other diseases)	616 9	
Bacteria infection of trachea		L43 424
(Bacillary intoxications)	616 931	
Diphtheria	616 9313	L43 4241

When we talk of a disease, the organ of human body affected is necessarily to be given a prominent place. From the above example, it can be seen in the DC class number for Diphtheria, that we do not find any term for respiratory system or trachea This shows that DC class number cannot be relied upon to give the subject heading pin-pointedly by Chain Procedure.

417 APUPA PATTERN

The ideal arrangement for the entries in a classified documentation list is Everywhere-Apupa-Pattern It is explained as [R8] "Whatever specific subject is brought up as his umbral region by any worker, the list should present an apupa pattern to him"

That is, on both the sides of the umbral region (specific subject) will be the documents on related subjects starting from alien regions through penumbral regions (one before and one after the umbral region) and ending again in alien region In this way, if we go towards both the sides of the umbral region, the entries will have successively a decreasing bearing on the specific subject But this ideal does not work out satisfactorily in practice, for the reason the universe of knowledge is multi-dimensional and universe of class numbers is uni-dimensional Classification has, therefore, to take the help of catalogue, which provides class index entries according to the Chain Procedure in its alphabetical part

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Note

1 The first column refers to reference number The second column refers to the section where the reference occurs in the text The third column gives the reference including the locus

2 The name of author for the reference, whose reference number starts with alphabet 'R' is S R Ranganathan

R1	1	Postulational approach to faceted classification *An lib sc* 5, 1958, 34
R2	414	*Ibid*, 48
R3	2	*Classified catalogue code* , edn 3, 1951, 18-19
R4	411	*Ibid*, 174-188
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R8	417	*Ibid*, 254-255
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W1	4	WELLS A J British National Bibliography *An lib sc* 4, 1957, 73-89

CHAPTER G3

Subject Indexing and Dr Ranganathan

N N PASSI

1 **History of Subject Approach**

11 EVOLUTION

IN the history of libraries we cannot pin-point with any confidence the date, the year or even the decade from which the subject approach, as we find it today, came to be noticed amongst the readers. Nor can we, similarly, give with any definiteness the solution adopted by different libraries to satisfy this approach in the earlier stages. In the same way we cannot measure the potency of this demand at that date because the data necessary for such a measurement is too scant and scattered—scattered not only over area but also in time. Like any other social change, this broadening of intellectual outlook also did not come but dawned and evolved. Under the circumstances, therefore, we can at best approximate. And for this approximation we have to consider the general capacity of a particular age—physical as well as intellectual—, factors governing change, the rate of change, effects of change not only in scientific and technical field but also the social repercussions that every change is ordained to have on a given people in particular and society in general.

12 BUDS

Keeping these measurements in view we can very safely land in the middle of the 19th century or even earlier because till then society in general and knowledge in particular were not so mobile, energetic and responsive to change as they are today, or, were after that period. Before that era a man could keep all the important literature in his head; or at least could say, and rightly so, that he has studied every book of his time. That was the time when man had just started conquering the physical powers of nature. He had started using his brain more than his hands; making use of machines more than muscular power; and fortunately enough the rate of this change was also very rapid. The application of machine to industry and other spheres was getting high importance. Naturally, then, everything multiplied. The tree of knowledge started budding as in spring. Sciences which till then stood quite overlapping began to shoot up as new systems Newer disciplines came up Emphasis also shifted Many old and popular disciplines began either to dwindle or to lose prestige Many newer sciences began to command respect and dignity.

13 FLOWERS

A parallel and a very significant change came with the technological advance in printing. Books were printed even before that era, but the phenomenon of the torrents, or the flood of books as we call it, was absent Classics and religious books only held the market till then Now, the books multiplied not only in the number of copies but also in the number of the titles Educational institutions multiplied Libraries multiplied Readers multiplied. Their approaches multiplied The old arm-chair librarian had to vacate in favour of the new Industrial revolution had indeed given birth to intellectual revolution

14 THORNS AND TEARS

To the new librarian the biggest problem came to be the subject approach of the readers The first solution was, obviously, classification—i e placing the books in a particular subject at-one place This was achieved by codification and enumeration, the best illustration of this was the Decimal Classification of Melvil Dewey But this was not found sufficient by itself Simply grouping did not give the desired results The problem became more and more acute when this codification began to crumble under the weight of new subjects and more so on account of the trend of scholarship which by the end of the last century had shown the trend of specialisation It proved to be the most trusted and crude weapon to fight against the growth of literature Catalogue was the other avenue which could be thought of to fill the gap This was necessitated also because no reader (and this is true even to this date) so much bothered about the classification but on the other hand consulted the catalogue to approach his book Here, again, codification was resorted to because no easier, better, and more handy method could be thought of The only advantage that it gave was a definite policy to a particular library But codification differed from one library to another The flair of the cataloguer was supreme in every library The result was confusion and anarchy Even a genius like A C Cutter could not solve the problem He was confused and gave contradicting decisions even while deciding between subject *Vs* person, person *Vs* place and place *Vs* subject The long felt need of standardisation in subject heading was at last fulfilled in 1910 with the first edition of *Subject Heading* of the Library of Congress that were in use in that library since 1897 But this suited only big libraries In 1923, a 183 paged book of Minni Earl Sears—*A List of Subject Heading*—solved the problem of small and medium sized libraries It was "compiled from the subject headings in use by nine libraries known to be well catalogued"

How soon the codification gives way is no where better illustrated than for the following data of the history of expansion of these two codes from the first edition to the present one

Edition	*Library of Congress Subject Headings pages*	*App increase*	*Sear's List pages*	*App increase*
1	1088		183	
2	1315	20%	415	127%
3	1535	41%	?	
4	2743	152%	?	
5	1204	10%	?	
6	1357	25%	?	
7			589	222%

How steep would be the curves if presented on a graph ? And moreover, we are yet to have many more editions Is there any end to this expansion ? New subjects are cropping up every now and then Specialisation within specilisation is now the established trend of modern scholarship Will codification steer us through ? Will it help us to answer the onslaught of subject approach, their interrelations, intensions, extensions etc, etc ? The answer is obviously, 'No' !

2 Chain Procedure

These questions are not new nor is this answer But the first librarian who answered this 'No' in a very positive tone was Dr Ranganathan He had observed, and rightly so that codification and standardisation therein helped us fight against the devil of anarchy but could not give us anything better than oligarchy He not only rejected the idea of codification but also gave us an entirely new technique to arrive at subject headings This technique is now quite popular and established among the libraries of the world and needs no introduction It has been named Chain Procedure after the process it involves

21 Why ?

Before taking 'what and how' of Chain Procedure, let us first discuss the 'why' of it This shall give us some insight into the philosophy of Chain Procedure, if any

211 SUBJECT APPROACH

The modern catalogue tries to satisfy the varied approaches of the readers,

—author, series, joint authors, collaborators, and subject Out of these the subject is the only approach that is flexible—to the extent that it can be made from any angle. For example:

"Report of the University education Commission (India)" can be approached from either of the words —

Commission report, University, Education, and India The duty of the cataloguer is to satisfy all the possible approaches but, at the same time taking into cognisance the fact that the life of a pedestrian work is only about ten years and if permutation and combination be adopted in deciding subject headings, there will be no end to cataloguing. For this reason we have to adopt a systematic procedure

212 FAILURE OF CODIFICATION

Secondly, if codification be adopted it fails, as we have already seen, even before it is put into practice The terms need constant revision New subjects or newer aspects of a subject cannot be given in all the libraries consistently unless new edition is out This would mean either not satisfying an approach which is against all the moral and professional canons of Library Science, or lapsing into anarchy in case we satisfy Again with every new edition of Decimal Classification, it becomes incumbent to have a new edition of Sear's list also because the subject terms stand for class numbers which do change with the new edition

213 INTERPRETATION OF CLASSIFICATION

Thirdly, a general principle is that the records in a library should not be duplicated unnecessarily The classification tries to group the books in one subject at one place While classifying we first of all decide the main class number and then sharpen it to the extent that the thought content are represented in the artificial language of class numbers In other words our sway is rightwards If cataloguing were also to do this very job, then, it would be duplication unwanted and of little or no use For this reason also we must try to satisfy the subject approach in our catalogue not after the pattern of classification but in some other way The result will be that our catalogue will be a true key to the classification

22 'WHAT' OF CHAIN PROCEDURE

Now let us see what is Chain Procedure—the device, the technique and the weapon that Dr Ranganathan has given—and how it helps us fight against the monsters of subjects It is a method for arriving at the subject headings from the class number directly, mechanically, automatically and without any prior codification

23 ‘How’ of Chain Procedure

Chain Procedure has certain prerequisites without which it cannot function

The first prerequisite is that a book must be classified first and catalogued later and not vice-versa This is very fundamental and essentially important It implies that a book would be technically read by the classifier and not by the cataloguer The classifier should assign a proper and befitting class number

Secondly the class number be co-extensive with the thought contents of the document Paraphrased into simple English it means that the class number must represent the basic idea of the book in the artificial language Without this the very essence of subject indexing with Chain Procedure is lost As Mr A J Wells has pointed out in his articles ‘British National Bibliography’ 2 how the experiment to adopt the Chain Procedure to Decimal Classification in B N B had many initial pitfalls and the biggest of these was the failure of the schedules to give co-extensive class numbers They had, therefore, to adopt[1] (i e one within square brackets) to mark the point where the class number is extended (verbally) to make it co-extensive

If on the other hand a self-perpetuating scheme of classification, as for example Colon Classification, is adopted and due liberty is given to the classifier with the help of mnemonics, subject device etc, etc, the work of the cataloguer in deciding the subject headings would be too simplified He has nothing but to make the chain of the class number taking the corresponding terms from the schedules of classification in use as follows

T4 44‘N5t

T	Education
T4	University, Education
T4	Flase link (since it ends in a connecting symbol)
T4 4	Asia, University, Education (Fused because the class number is further sharpened by Geographical Device)
T4 44	India, University, Education
T4 44‘	False link
T4 44‘N	Indian University education brought up to 1900 (Fused because the class number is further sharpened by the Chronological Device)
T4 44‘N5	Indian University education brought up to 1950 (Unsought because neither we can express it in words nor will there be reader’s approach)
T4 44‘N5t	. Commission report, India, University, Education

Having made the chain, the work is simplified He has to sort out the sought (from the readers’ point of view) subject headings from amongst the unsought, fused and false links as shown above Every sought link is the heading and is to be individualized, if need be, with the help of upper sought links The above chain will give the following subject headings

1 COMMISSION REPORT, INDIA, UNIVERSITY, EDUCATION
2 INDIA, UNIVERSITY, EDUCATION
3 UNIVERSITY, EDUCATION
4 EDUCATION

3 Chain Procedure and Classified Catalogue

This procedure is best suited to the classified catalogue, a complete code for which, again, is another fundamental contribution of Dr Ranganathan It is designed to satisfy the subject approach to the maximum It has two parts, one alphabetical and the other classified

In the latter the arrangement is by class number whereas in the former it is according to the alphabet The alphabetical part serves as a key to the classified part These subject cards are filed in the alphabetical part because their leading section is occupied by the names of the subjects This section is followed by a directing section which guides the readers to consult the calssified part under the corresponding class number, of which the leading section gives a translation in a natural language Thus, the above subject cards will ask the reader to consult the following class numbers respectively

1 T4 44‘N5t
2 T4 44
3 T4
4 T

In the classified part, which consists of the main entries and the cross reference entries and where the arrangement is by the class numbers, he will not only find his desired books but also parts of other books, with the different class numbers, but bearing on the same topics, of which he did not either know or come to hear about This means, in other words, satisfaction of expressed as well as unexpressed wants Who can measure the joy of a reader at that time ? This gives service par excellence to readers as well as to the reference librarian It is service personified

4 Chain Procedure and Dictionary Catalogue

When the Chain Procedure is applied to the dictionary type of catalogue it proves to be a misfit The charm, satisfaction, service and joy all become a headache This is not because of any shortcoming on the part of Chain Procedure but because of the construction of the dictionary catalogue It has only one sequence arranged according to the alphabet just like a dictionary. The readers cannot be, therefore, directed to consult any other but some part of this very sequence This implies that either we should repeat the information already given in the main entry in all the subject cards or, give at least under one and direct the readers from the others to that card The former method is not practicable The second method is, therefore, resorted to Our practice is to give author, title and class number immediately after the subject heading in one entry which we call as specific subject entry Other subject cards will just be directing the reader to consult this specific subject entry These cards are named '*see also*' cards because they direct the reader to see also the specific subject card

Till very recently, the last sought link subject heading was given in the leading section of the specific subject entry and all the upper link subject heading were relegated to '*see also*' entries But this did not give good results The reason is obvious Very few—say 3 to 5% of regular readers only—can form the specific subject approach This was, and still is, the approximate percentage of readers who can form this approach and that too not always The rest—i e 95% and constituting the majority—had to be directed to the specific subject entry This in other words means that every specific subject would call for one card under each broadest subject to guide the readers to that specific subject For example, under 'Education' we would have the following *see also* cards.

EDUCATION
  See also
  CURRICULUM, EDUCATION
  TEACHING TECHNIQUE
  PRIMARY, EDUCATION
  CURRICULUM, PRIMARY, EDUCATION
  CURRICULUM, SECONDARY, EDUCATION
  UNIVERSITY, EDUCATION
  INDIA, UNIVERSITY, EDUCATION
  COMMISSION REPORT, INDIA, UNIVERSITY, EDUCATION
ad infinitum

Similarly under 'university education' there would be many cards like

UNIVERSITY, EDUCATION
  See also
  TEACHING, TECHNIQUE, UNIVERSITY
  INDIA, UNIVERSITY, EDUCATION
  GREAT BRITAIN, UNIVERSITY, EDUCATION
  COMMISSION REPORT, INDIA, UNIVERSITY, EDUCATION.
  and so on

This means that the dictionary catalogue has at most been able to achieve alphabetical classified pockets under the various sought terms like, Education, University Education etc, etc These pockets primarily meant to help a reader confuse him on the other hand For example, a reader comes with 'University education' approach (a mediocre approach that can easily be formed by more than 50% of readers) He will be directed to see also not one or two and not even dozen specific subjects but many more Every book on any aspect of University education will have one '*see also*' card under this broad subject with the only proviso that no two similar cards will be filed or made This is just to avoid unnecessary duplication The reader will have first of all to make up his mind and then go to the second pocket where he will be guided by other '*see also*' cards, then to go to the third pocket, and so on This means he is not being served but guided from pillar to go to post The persistent and insistent type of reader only can manage to get the desired book and that too when a good deal of his time and energy has been wasted in search In the ultimate, moreover, he will get one book—the specific subject of which he had chosen—or at most a few, if the specific subject heading is shared by some more books also

What about the headache ? What about the un-expressed wants ? What about the wastage of time and energy ?

5 Research in the Idea Plane

These acute problems needed solution For many years no solution seemed possible because of the single sequence of the arrangement Even though the subject cards are filed both in Classified Catalogue and Dictionary Catalogue according to alphabets, the results in both were quite opposite In the former, as we have already seen, it gives an ideal picture In the latter, on the other hand, it at most gives alphabetical pockets which confuse more than they serve

It was Dr Ranganathan, again,—the pioneer in many fields—who after a good deal of research, gave us the solution in the fourth edition of *Classified catalogue code*

In the idea plane, it was argued 'when 3-5% of the constant readers only can form the specific subjects approach, and that too not always, and the majority of 95% cannot, then, why should the last sought link be the specific subject heading ?' This was a very sound argument but raised other fundamental problems

1 Which of the subject headings should, then, be taken to form the specific subject entry ?

2 The Chain Procedure gives anti-classification pattern and its sway is leftwards If we change over and decide to give the specific subject under any other but last sought link, this sway would also change This means our subject indexing would cease to interpret classification

3 If any other but last sought link is made the specific subject heading

will not the Chain Procedure be consistent in rules in Classified Catalogue as compared to Dictionary Catalogue ?

51 Help from Classificaton

A parallel research on classification was done The construction of class number was studied very minutely After analysis in the idea plane, it was found out that in every class number there is something which is permanent, and also something which is temporary, some part which remains constant and also some which varies from document to document, something which is always intrinsic, and also something which is alien, foreign and can be changed

To illustrate let us take the following class number

L 421 5 44 'N5—Prevention of tuberculosis in India brought up to 1950's

In above class number the main problem is 'Prevention of tuberculosis' which is represented by L 421 5 This is constant The remaining part of the class number—i e 44 and 'N5—represent India and 1950's respectively These are variants We have so many books on prevention of tuberculosis relating to different countries of the world Similarly we can have many books on different periods of time and dealing with the subject chronologically For example, 'preventive steps taken in Great Britain' will get 56 while USA 73 In the same way, a book dealing up to 1910 will be 'N1 and that of 1930 'N3

Thus, we can see that the burden of class number is prevention of tuberculosis, India and the year are only embellishments In the same way we can find out which part of the class number is constant and which is variant

6 Rules in the Notational Plane

After this generalisation in the idea plane, Dr Ranganathan gave us a new set of rules for Chain Procedure as applied to Dictionary Catalogue

According to the new rules, the cataloguer has to split every class number into constants and variants The signal for a variant has been set at every common isolate (a technical term which means that part of the class number which we get from schedules common to all the class numbers and which is normally space, time, anteriorising or posteriorising type of common isolate) We term the chain of constant as first part of the chain, chain of the first variant as the second part of the chain, chain of the second variant as the third part of the chain and so on as shown below

T	Education
T4	University, Education

T4	.	False link (Since it ends in connecting symbol for space or time which are common isolates, the second part of the chain has started)
T4 4	.	Fused.
T4 44		India, University, Education
T4 44‘		False link (Third part of the chain starts)
T4 44‘N		Fused.
T4 44‘N5		Unsought
T4 44‘N5t		Commission report, India, University Education (Since it is anteriorising common isolate, therefore, it is fourth part of the chain)

Having broken the chain into parts, our specific subject headings will be

UNIVERSITY, EDUCATION, INDIA, COMMISSION REPORT

We shall be directing the readers from all other approaches to this heading

By splitting the class number in parts we have become more realistic and have captured the potency of the subject a point where it coincides with the general reader's approach Mediocre approach which is normally, generally and usually formed without any difficulty has been tapped and now we are in a position to satisfy more than 50% of the readers of a library University education, all connected topics thereto, relating to any country will be grouped at one place In the same way 'Prevention of tuberculosis in various countries' will find one place and all the entries there will be arranged alphabetically among themselves

So much has been achieved without violating our principle that in deciding subject headings our sway must be leftward Our sway is leftward though in parts Similarly, a better and more potent subject heading has been chosen than the last sought link though our rules have changed in Dictionary Catalogue as compared to Classified Catalogue But we can overlook this also looking to the commendable results

7 Evaluation

To say that the new rules of Chain Procedure are now fit to Dictionary type of catalogue will be true only subject to a few limitations —

Under the broadest subject there will still be an alphabetical classified pocket which will confuse more than serve

It will be directing the readers to consult its various aspects But this is a necessary evil Unless we give one card under the broad subject, we cannot guide the readers who cannot form even mediocre approach

There has been no decrease in the '*see also*' entries On the other hand, there will be one more '*see also*' entry (than in classified catalogue) for a class number which has any common isolate. This is because we have derived our specific subject heading from the parts of the chain and for all sought links we shall have to prepare '*see also*' entries. This, also, can be overlooked keeping in view the increase in the percentage of readers that will be satisfied by subject indexing according to the new rules.

But these are not the shortcomings of Chain Procedure. The constitution of Dictionary Catalogue is such that it cannot help the reader beyond a certain degree.

8 A few Words about the Creator

How much can a man in a single life—a span of a few decades—achieve or do ? Generally speaking, a little. But this is not true in the case of Dr Ranganathan. 'Towards ultimate perfection' has, perhaps, been his motto, though, we all know, we never are and shall never be perfect. Normally generations are required to complete one system. But Dr Ranganathan has not only initiated new ideas, new techniques, new methods and new librarianship but also has tried his best to perfect everything. To say that he has been successful also will not be over-estimation or exaggeration of facts. According to my estimate, which shall be shared by many more, his most fundamental contributions in the sphere of cataloguing are the Classified Catalogue and Chain Procedure. These are the two devices which help the librarian to give to the readers a service unrivalled, joy unbound, charm beyond measure, and encouragement beyond control to read more and more and still more. Chain Procedure has not only released the librarian from the pangs and miseries of codification (which has been nick-named in the West as cataloguing with tears), but also made him able to give efficient service smilingly.

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CHAPTER G4

Author-Title Catalogue as a Sequence of Quasi-Classes and its Legitimate Subject Functions

MARTIN MULLEROTT

0 Abstract

THE Alphabetical Catalogue or Author-title Catalogue (ATC) is defined as a canonical sequence of real (or potential) quasi-classes with predominance on the author part. Many libraries of old standing have practised subconsciously the ATC as an assemblage of quasi-classes and on practical lines also often with the intention to give a substitute for the missing subjects catalogue. Instances given are the Quartkatalog of the Bayerische Staatsbibliothek and the Hauptkatalog, Universitatsbibliothek Tubingen. The proposed definition tries to give the legitimation for those subject functions because they are already inherent, only emphasized faculties of the ATC, the question what have you got by (and about) a certain author being the specific question of the ATC—the quasi-class question. In this context the denotation of the ATC as "formal" loses much of its meaning. It seems natural to arrange quasi-classes alphabetically.

1 Discovery of Quasi-Class and ATC

In old general libraries, the Alphabetical Author Title catalogue plays an important, in fact the predominant part and the staff has to devote much of its energies to its maintenance. Therefore, our venerated jubilant will, as I hope, excuse me, writing today on subject aspects of the author catalogue, a problem which has simmered in my mind since some time. I remember very vividly the answer of a renowned German librarian of the Berlin tradition telling him of some particularities of the alphabetical "Quartkatalog" of the Bayerische Staatsbibliothek begun in 1840. I told him that it puts as headings literature about authors, that certain poets with a very rich exegetive literature, e g Geothe, have got two subject entries, an alphabetical and a classified "Stangenblatt" and that there are even real subject entries so "Life of Jesus Research" after the editions of the Bible and, as a quite recent addition the literature about the Dead Sea Scrolls He listened to it and replied politely All very well, it's certainly practical but after all the task of the subject catalogue I was never satisfied with similar answers, holding to the supposition that something practical must have an intrinsic logic, perhaps still to be discovered But it had already been discovered by Ranganathan's concept of quasi-classes for sacred and classical literature One has only to add, that each author, not only those producing seminal works and provoking literature are at least potential quasi-classes Many old ATC catalogues have found this out, so their functions have much more comprehensive value as presumed Sometimes the subject functions have been deliberately emphasized with the intention to fill the gap of a non-existing subject catalogue But even today this question is not a study for the sake of theory or history, but also of economic importance Smaller and medium sized but even bigger libraries discuss the question how to economise with their catalogues eventually to coordinate their tasks to get the maximum efficiency for both, readers and staff So, Fock gave recently interesting proposals for a cooperation between the Classified Catalogue and the Alphabetical Subject Catalogue advising to shift the time and space bound literature from the Classified Catalogue to the Subject Catalogue That the ATC could also contribute in cooperation is more or less overlooked, its structure devised by the Prussian Instructions considered as taboo, though perhaps no reader would object to get the literature about Goethe in the same catalogue as he gets it, e g in the catalogue of the British Museum

2 **Characteristics of ATC**

He will have this possibility, e g in the Hauptkatalog of the Universitatsbibliothek Tubingen devised by Robert Gradmann in the beginning of this century The main characteristics of this ATC, approaching the Dictionary Catalogue are—apart from the mechanical sequence of words—the choice of geographical names as main entries, whenever possible biographical or exegetical literature at the end of the author entry, then a list of subject headings in the ATC for German laws, International Congresses, sacred literature and last but not the least facility to keep together the literature issued by societies i e of corporate bodies So all in all the catalogue approaches in many respects the ALA Cataloguing Rules and shows many features of the Dictionary Catalogue The Tubingen Catalogue serves of course primarily as ATC, but takes in addition just the kind of literature which Fock wants to give to the alphabetical catalogue Since it is already working for half a century to the satisfaction of both staff and readers it may well be recommended as a study case.

3 **Ambiguity**

Let us now consider how this very narrow conception of the ATC came about and that the above mentioned transgressions in the subject sphere are commonly regarded as concessions to the practice in past, but are never taken seriously as possibilities for the present and future We think that there are two principal misunderstandings

1 That the reader, using the ATC, knows in most cases exactly what he wants, he wants this and that book by a particular author

2 That the ATC is an entirely "formal" catalogue.

As to the first point, this is not always the case, it may even be the minority of cases, for the reader will sometimes remember the author and only dimly the title of the subject and retrieves the book this way On the other hand, a reader who knows of a certain book on continued fractions may turn to the Classified Catalogue to retrieve the name of the author and this very book and nothing else It is of course true that the reader interested in a certain author has already a pointed interest But given that the task of the ATC should consist only in giving the call number of particular books, it would be quite irrelevant whether authors with the same family and personal name are mixed up with others and one could indeed save the time of the staff to keep them apart This has of course been done by some ATC's and almost all Union Catalogues, and it is quite evident that here the experience of the Union Catalogues did influence the theory of the ATC

4 **Union Catalogue and ATC**

The most decided or let us say the most formal Union Catalogue was Berghoffer's Sammelkatalog at Frankfort neglecting even the Christian names of the authors As an auxiliary catalogue, as a finding list, it was extremely well adapted to answer the question for a particular book while saving much time of the staff But it is interesting that after all most Union Catalogues trouble themselves to keep at least the important authors, say Goethe, cleanly apart from other namesakes Is it after all a legitimate question for the ATC to ask what have you got by a certain author, a question otherwise only to answer by a personal bibliography perhaps never coming into existence ? What do we look for, when we turn to an encyclopaedia looking for the entry Darwin ? We find the entry with date of birth and death we find within the flesh of his life and the evaluation of his principal works and at the end a bibliography with biographical and critical literature Does not the ATC give the same with its author entry: date of birth and additional information as to profession and residence with its list of works—for a book worm always so very instructing—finally with the literature about him ? An ATC of this kind is really the skeleton of an encyclopaedia lacking only the flesh of evaluation And nobody will deny the subject functions of an encyclopaedia So the quasi-class conception of the ATC seems best to fit with theory and practice

5 Standardization of names

But there is still that second point of the ATC as a thoroughly formal catalogue It is but not a consistent one There are exceptions, at least interesting modifications of that "formal" principle "alphabetical sequence" Most alphabetical catalogues practise some kind of uniformisation of names e g with the prefixes M Mc or Mac as in MacCarthy or McGillioray In Germany we have the equal sounding family names of Maier, Mair, Mayr, Meier, Meir, Meyer or Meyr. It has been proved by experience that nobody cares very much how the person Maier spells his name so long as they ought not address him in a letter The phonetic memory of names, coming first in human life, proves to be more powerful than the literal memory how a person's name is spelt Uniformisation of names is so an aid to our somewhat shaky literal memory

6 Vexed Problem

The formal principle of the ATC being not in itself consistent we might finally discuss whether that formality means very much at all At any rate there is no alternative principle for quasi-classes Every classifier knows that great authors overlapping many fields of knowledge are a vexation and annoyance But they are also too big to become allocated to any time and any country, though they have of course birthday and country of birth Only minor authors are lost for posteriority, if they are not preserved at their proper places and in the right context and so it is with writers of microthought With the great minds of mankind one may differentiate from all temporal and regional connections To arrange them alphabetically seems to have almost natural foundations

CHAPTER G5

An Intermediate form of Catalogue between the Classified and Subject Catalogues

ERNEST RUCKERT

1 Use of Catalogues

UP to the nineteenth century, catalogues, giving information on the contents of the collection of books were not considered essential in libraries. To-day preparation of the Classed Catalogue is looked upon as the crowning activity of a librarian. As a matter of fact, it may be said that with the constantly increasing production of books the effectiveness of a library depends essentially on the quality of this catalogue. The librarian has at his disposal, two methods for preparing Classed Catalogues: the arrangement of the titles according to a deeply classified scientific system (Classified Catalogue) or the alphabetic arrangement of the subject headings (Subject Catalogue). Both types of classed catalogue have been used in general and special libraries in various parts of the world, either alone or side by side. In America an extension of the subject catalogue, namely dictionary catalogue, which is a combination of formal and subject classification, is used. The fact that many libraries use the two catalogues side by side, shows clearly that the classified catalogue or the subject catalogue alone does not fully meet the demands made by the user or the administration.

2 Classified Catalogue *vs* Dictionary Catalogue

The classified catalogue, which presents the holdings of a library in a system, (which is worked out before starting the cataloguing) made up of specific sub-groups, attempts to give a compact view of the entire human knowledge and of the relations between the individual sciences. With the help of a classified catalogue, say Dewey's Decimal Classification (DC), a clear idea of the holdings of a library according to fields of knowledge can be obtained and the holdings can be increased according to a plan by acquiring new publications. The increasingly complex and manifold nature of human knowledge however, makes it more and more difficult even for such a system as DC, with its practically unlimited possibilities of enlargement, to classify all the nascent thoughts and problems. This example shows that classified catalogues, even if they have an international character, are influenced by the time of their birth and require repeated revisions of the individual parts in order to meet modern requirements As against these weaknessess of the classified catalogue, the subject catalogue has the following advantages there is no fear of the catalogue becoming obsolete and the user need not get acquainted with the complex and everchanging structure of a science Since in the subject catalogue, subject headings are arranged alphabetically (as in an encyclopaedia) it gives information rapidly, on any desired topic, and can be used by any body knowing the alphabet and the language concerned But subjects that are mutually related regarding their content are brought into a compact group by the classified catalogue whereas the subject catalogue scatters them under subject headings that are alphabetically far apart This is considered to be a drawback of the subject catalogue

3 Group Subject Catalogue

In order to avoid these difficulties which are presented by the Classified Catalogue as well as the subject catalogue, the "Deutsche Bucherei" (DB) in Leipzig has developed what is known as "Group Subject Catalogue" This is the result of a fusion of the two types of catalogues and can claim the advantages of the classified catalogue and the subject catalogue The superstructure of the catalogue, consists of the following 10 rigidly fixed and easily understood main groups

A	Generalia, Books and Correspondence, Education
Ph	Philosophy, Religion
Ku	Art, Music, Drama
Li	Languages, Literature
Ge	History, Social Sciences, Geography, Ethnology
Re	Law, State (Politics), Economics
Me	Medicine, Pharmacy
Ma	Mathematics, Natural Sciences, Agriculture, Forestry
Te	Technology, Handicraft
Sp	Sports, Games, Domestic Economy, Miscellaneous

As a result of the division of the entire field of sciences into systematic main groups, each of which covers several internally related fields of science, mutually related problems and topics are included in one main group (unlike the subject catalogue) The number of main groups was deliberately restricted to 10 because, the number 10 has become part and parcel of life in many countries and a group of 10 elements is easy to see at a glance Hardly any user should have any doubt regarding the main group in which the information desired by him will be found, although he may be using the catalogue for the first time Another advantage of this relatively small number of main groups is a reduction in the number of boundary regions between these science groups and consequently in the number of reference cards that load any catalogue. According to the laws of combination, ten groups give rise to 45 boundary regions, while e g 20 groups would increase the number of boundary regions to 190

4 Catalogue of Deutsche Bucherei

The classed catalogue of DB is a transition (from subject catalogue) to the classified catalogue regarding its substructure also. The main subject headings, are arranged in alphabetical order within each group The main subject headings are almost exclusively broad subject headings or subject fields (as College Education, Drama, Taxes, Geodesy etc) These subject fields, whose number is naturally limited, are classified systematically, in the usual manner "from general to particular" The general and specialised literature in a subject field is treated together or distributed to a few subject fields, in the best manner possible (For regularly recurring formal groups, keys are also extensively used while subdividing the subject headings) The individual divisions and sub-divisions of a subject field are indicated by guide cards of different colour and shape Notations are not used Hence the catalogue has great flexibility and is capable of adaptation and enlargement in all respects, in order to accommodate progress in science and social developments, thanks to the principle of subject heading If on a particular concept a large amount of literature has already appeared and has achieved importance in several fields of science (e g the concept of atoms), it may be advantageous to select the narrow concept as the main subject heading Moreover, references from broad subject headings to independently occurring narrower subject headings as well as cross references between related subject fields and science fields make it easier to locate the literature available on any desired problem

41 SUBJECT HEADINGS

While deciding the subject heading for a particular piece of literature the subject point of view is naturally more decisive than others like space or time If the reference is devoted to a special field i e architecture, common law, geology or paper industry, the field is selected as the subject title even though the reference deals with a regional investigation, the region or place is considered only as sub-heading Further, basically, the literature on one problem is collected in one place (under one heading) irrespective of the group division This is particularly true of historic, economic and legal literature, concerning a special field or a profession Thus e g the History of the Labour Movements is brought along with the literature on workers, under the group Law, State, Economics Film Economy and Film Technology are placed under the heading "Film" in the group "Art". Medical Law comes under the heading "Physician" in the group 'Medicine' (with corresponding references to other groups concerned)

5 Regional Catalogues

A special importance is attached to the broad heading "Regions and places" in the group "History etc" All the reference dealing with the history, politics, culture and land law as well as general, economic and social problems of a region or place (not questions of law) are filed in one alphabet of the regions and places In addition, there are reference cards for all headings which have a regional sub-division Thus literature referring to a region or a place can be easily located In the same main group (History etc) there is a type of "Biographical Catalogue" under the heading "History of Persons" as a counterpart of this "Regional Catalogue" Here all references on the life and work of a person can be found even if information on him is treated in only parts of the publication If in a reference, the relations of a person to a subject or space problem is dealt with the title concerned is classified a second time under the subject or place heading Thus the subject catalogue of the DB covers not only the main theme mentioned in the title of a reference, but also other topics dealt within the reference This is done by means of multiple classification (with corresponding annotation) It may also be mentioned that in addition to the subject headings which cover the subject contents of the references, there are headings indicating the literary form of the reference (e g school book, novel etc) Thus the entire field of "Belles Letters" has also found a place in the subject catalogue of the DB and has been coded from the following points of view according to the epochs or historical personalities dealt with in poems, according to the scene of the action and finally according to individual subjects and themes

6 Index Catalogue

Since the 'Group Subject Catalogue' of the DB is based on the principle of broad subject headings, it has been found to be advantageous to prepare for each of the ten main groups, a detailed alphabetical subject heading index This contains, in addition to the main and sub-headings, reference cards of individual terms, technical terms and key words to the respective main subject headings Also, for different science groups, classified indexes of the subject headings and sub-headings (inducing those from the related fields) have been prepared These indexes give information on the ultimate relations and thereby replace a purely classified catalogue in every way

7 Utility of Group Subject Catalogue

Thus it can be seen that this subject catalogue, by the division into groups, by the use of broad subject headings and alphabetical and classified indexes as well as by the intensive break-up of the collection of literature (provision of two or more title cards for one reference) provides the interested person, references which he cannot find either in a classified catalogue or a subject catalogue (with narrow terms) In the "Group Subject Catalogue" or "Problem Catalogue" as it may be also called, the answers for the most varied questions, are ready made

CHAPTER G6

Indexing Physical Chemical Properties of Antibiotic Substances

A NEELAMEGHAN

0 Introduction

CHEMICAL compounds are usually identified by comparing their physical and chemical properties with those of known ones. In the case of biologically active compounds such as antibiotics comparison of biological properties may also be necessary. For such comparative studies collected and organized data on compounds already reported and also facility of approach to the data from various angles are essential.

01 PAST WORK

The physical, chemical and biological properties of antibiotic substances have been subjects of numerous reviews, data books and manuals. These compilations are not, however, done specifically from the point of view of comparing and identifying newly isolated compounds. In a few works[1,2,3] some detailed classification and indexing of data provide for different approaches to the information recorded. Recently, the Antibiotics Research Institute, Warsaw, issued printed cards to supplement the classification and indexing done in the book published from that institute.[1] There is a basic set of cards, one for each antibiotic (726 cards in the file now available) recording physical, chemical and biological characteristics together with reference to original report. The cards can be arranged by any of the physical or chemical data recorded. A separate set of bibliographical references has also been issued by the Institute. Certain punched card systems for retrieval of information in the chemical field include antibiotics.[4,5] Ohrmund[6] describes an IBM punched card system more specifically developed for antibiotics information retrieval. The scope of application of mechanized systems is indeed vast and their capacity for information retrieval appears to be limited only by our ingenuity to feed the appropriate codes into the system. And yet methods for information retrieval have often to be adapted to meet special requirements and equipment that can be afforded and operated economically.

1 Indexing Data

At Hindustan Antibiotics Library a classified card index to the literature of antibiotics is maintained and kept up to date A basic reference file of antibiotic data similar to that described by Ohrmund[6] was prepared. (Fig1) When antibiotics were isolated in this laboratory it became necessary to compare their properties with those of known ones Such preliminary comparisons not only help in identifying compounds partially or completely but also in making further studies with the newly isolated ones. Provision of indexes to the physical and chemical data such as melting point, ultraviolet spectrum, etc, facilitates narrowing the range of search among the known compounds and also recognition of similarities between them and the compound on hand

Among various methods thought of punched cards and uniconcept coordinate indexing were found the more feasible However, we are also interested in a data index which the scientist can make for himself for any particular type of compounds on which he may be collecting information Such an index needs to be compact so that the researcher may keep it in his files for ready reference It should also be capable of indexing data on new compounds without disturbing the order and indexing already done Examples from the indexing method worked out are described below

The basic data file may be arranged in any preferred order, let us say, by the species of microorganism producing the antibiotic Each data card or sheet is serially numbered providing for accommodation of new data cards in each category For example,

Antibiotics from bacteria	1	to	199
Antibiotics from actinomycetes	200	to	999
Antibiotics from moulds and fungi	1000	to	1499
Antibiotics from lichen	1500	to	1599

Physico-chemical data such as ultraviolet maxima, melting point, etc, are indexed as in the specimen charts given The charting can be done for all the data cards or for individual groupings or sub-groupings as desired

In chart 1 for ultraviolet maxima, each square represents one wavelength in m/u on the horizontal in units (0 to 9) and the numbers 210, 220, etc in the first vertical column denote the beginning of the range Serial numbers of the data sheets (which are sort of call numbers for the antibiotics) are posted in the appropriate squares such that numbers of compounds having the same u v maxima fall in the same square Thus, for antibiotics with u v maximum 236 m/u we check the data sheets numbered 39,53,88,111 If the compound on hand has an additional maximum at 276 m/u we know from the chart that only the antibiotic numbered 39 has these two maxima

In the melting point chart 2, the serial numbers of the data sheets are posted in the squares headed by the relevant melting point range such that serial numbers of antibiotics having the same melting point range fall in the same square The melting point range is divided into steps of 5°C Normally, this range is necessary in preliminary comparisons when the exact melting point of the compound on hand may not have been determined

In a similar manner other data, e g infrared spectrum, optical rotation, for the particular group of compounds can be charted out A specimen empirical formula chart is given in chart 3 Probably an arrangement of the empirical formulae in the usual form ie C, H, N, O etc may be easier to consult But in the chart form new formulae can be indexed as and and when they become known without disturbing the previous charting Visually, it is also much easier to find certain type of information from the chart, eg all antibiotics containing sulphur, or chlorine

It would be noted a great deal of similarity between the charts and uniterm cards if we consider each square in the chart as one uniterm card The charting method can be extended to other fields, whenever physical or chemical data are to be indexed for particular group of entities It should be noted that in a 10″×10″ chart with each square about 1″×1″ the total number of items that can be conveniently recorded would be about 15,000

From practical use in the last three years in this laboratory the charting method has been found quite convenient for retrieving information on physico-chemical data of antibiotics than with the use of card indexes

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Fig 1

DATA FILE ON ANTIBIOTICS

Antibiotics

Physico-Chemical Data		*Ref*
Empirical Formula		
Analysis C H N	O S Cl	Mol wt
Cryts form		Colour
Melting point (°C)		
Optical rotation		Ultraviolet spectrum
Infrared data		
Solubility Chemical nature		
Colour reactions, tests		
Chemical structure, degradation studies		
Stability		
Inactivating agents *Antibiotic*		
Biological Data & Isolation		*Ref*
Source organism		
Antimicrobial spectrum		
Toxicity		
Isolation extraction		
References		

CHART 1. ULTRAVIOLET ABSORPTION MAXIMA INDEX

λMax	0	1	2	3	4	5	6	7	8	9
210 210	39 41	166 207 208 253	29	7			7 129	70 214		
220	121	26			53	12 69	69 129		70 107	
230	9 77 121 165	165	88 89 111		51 165	52 78	39 53 88 111	41 70	161 215	158 161
240	9 230	18 70 75 116	72 88 100 117	104	111	75	29 53 57 75	26	39 75	41
250	30 127 40 194 58 198 69 201 98	104 215	84 173	178 180 199 200 211		37 183		129	84 85 89 110 173 183	60 214 226
260	3 110 12 204 35 230 75 88	27	13 39 53	31 41 161 227	27 84 173	213 215	110 115	42 115 113 161	73 110 198 201	85
270	9 203 14 205 56 85	182	216	135 190 212	85 214 226 227	12 130 24 223 32 232 42 91	6 39 85 213	41 197	40 86 202	57
280	69 211 215	129	182		92 93 107	9	70 97 98	83	200	36 129
290	69 227 142 176 177 214	12 182 226		26	213		129 197	211	301	

(1) 297-300 mμ (2) 226-320 mμ

(3) 255-260 mμ (4) 270-280 mμ

CHART 2 MELTING POINT (°C) RANGES INDEX

MP	25 — 30	30 — 35	35 — 40	40 — 45	45 — 50	50 — 55	55 — 60	60 — 65	65 — 70	70 — 75
SNos		26	91		36	70	29	21 32	33	130 218
MP	75 — 80	80 — 85	85 — 90	90 — 95	95 — 100	100 — 105	105 — 110	110 — 115	115 — 120	120 — 125
SNos	144 210	131	21 167 44 149	11* 38 57	51	8	34 153 124 125 136	6 185	5 17 121 214	7 123 64 146 78 148 85 290
MP	125 — 130	130 — 135	135 — 140	140 — 145	145 — 150	150 — 155	155 — 160	160 — 165	165 — 170	170 — 175
SNos	7 160 85 120 159	11 89 54 101 65 108 77 137	22 150 111 154 134 155 135	89 169 99 231 117	10* 114 52 140 88 166 100 207	87* 4 110 157 129	47 221 73 186 220	18* 67 23 145 42 53	95 219	3 58 142 15 75 143 30 139 37 141
MP	175 — 180	180 — 185	185 — 190	190 — 195	195 — 200	200 — 205	205 — 210	210 — 215	215 — 220	220 — 225
SNos	79 98 173	31 113 147 224	115 122 128	96 107 152 158	9* 119 12* 195 56	19 102 60 107 63* 126 94	71 127 76 133 92 156 109	72 132 108 165 115 116	83 206 84* 97 106	43 118 82 165 116 189 117
MP	225 — 230	230 — 235	235 — 240	240 — 245	245 — 250	250 — 255	255 — 260	260 — 265	265 — 270	270 — 275
SNos	28 93 188 35 151 191 55 170*208 59 182 92	27 93 184 74 170*228 80 172 86*174	48 181	104 176 225	175	20* 163 222*	138 175 192	103*	69 105 175 229	187
MP	275 — 280	280 — 285	285 — 290	290 — 295	295 — 300	300 — 305	305 — 310	310 — 315	315 — 320	320 — 325
SNos		193	164	62 162	24	13 171*			14 81	68
MP	325 — 330	330 — 335	335 — 340	340 — 345	345 — 350	350 — 355	355 — 360	360 — 365	365 — 370	Above 375
SNos						168	61	196 217		1

CHART 3: INDEX TO EMPIRICAL FORMULAE

		0	1	2	3	4	5	6	7	8	9
	C							73	58 127 126	128	129
	H							126 127		58 76 73 128	
0	N		1 75 88 114 2 81 91 3 83 96 4 84 100 19 86 110 52 87 113	51 90 73 101 76 104 77 105 80 106 89	108 115	34 103 111 126 131	97	82 85		92 99 112	
	O			59 126 75 127 76 128 77 129 99	58 80 85 89	34 86 126 78 87 81 91 83 97 84 116	60 61 73 78 82 88	63 131 64 76 96 116	62 65 100	66	18a 104 90 105 92 106 98 101 103
	S			126 129 127 131 128		126					
	C		75	76 78 77	59 80	81 83 82 126	84 87 131 85 88 86 90	60 91		61	
	H	59 129	77	126	75	78 131			84	60	60 81
10	N	98									
	O	26 90	69 112	110 111	27 68	1 3 20 109 2 19 108				51 114 113	4
	C	92		62 96 63 97		64 99 98	65 100	66 103 101	104 105	67 106	
	H	60 82 85 62 83			86 88 87 91	96		80		89 90	98
20	O	52 115	155	115						110	

PART H

DOCUMENTATION

CHAPTER H1

India's Contribution to the International Federation for Documentation

T S RAJAGOPALAN

Contractions used:

BC = Bibliographic Classification
CC = Colon Classification
FID = International Federation for Documentation
FID/CA = FID Committee on General Theory of Classification
UDC = Universal Decimal Classification

0 Introduction

THE objects of the FID are "to bring together at the international level and to coordinate the activities of organisation and individuals concerned with or interested in documentation, to develop the study and organisation of documentation, and to create an international network of documentation." After many years of hard work and persuasion of the Government Dr S R Ranganathan succeeded in getting India join the FID as a national member in 1952. Insdoc was established in the same year and it has been acting ever since as the national body representing the country in the FID.

01 DR RANGANATHAN'S PARTICIPATION

Even prior to India joining the FID, Dr Ranganathan had been closely associated with its work. The FID had been treating him as early as on 1948, as if he were a representative of a member nation. He attended some of the meetings at the invitation of the FID. The participants from the different countries soon began to understand the value of his work on classification. In view of his pioneering work on faceted classification, he was requested by the FID in 1947 to contribute the paper on "Classification and international documentation" [R1]. He has been the Rapporteur-General of the FID/CA since its inception. He has been one of the Vice-Presidents of the FID representing Asian member nations for three terms. He was also for some time on the editorial committee of the *Review of documentation* the official organ of the FID. The FID has done him the great honour of electing him as the *Member d'Honour* in 1957 Only six persons are recipient of such an honour up till now This is a tribute to India's role in the field of documentation

02 FID/CA

The FID has study committees on various aspects of documentation The FIC/CA is one such committee It has also become a main committee recently. Its scope is "to study the principles of classification and to compare and evaluate different classification systems especially from the standpoint of classification theory" On its formation in 1950, the FID spontaneously entrusted the work of the committee to India This is because it is only in our country, active fundamental work on the subject, particularly on depth classification so essential for documentation, had been initiated At the commencement, Dr Ranganathan was invited to become the Rapporteur-General of the committee as India had not yet become a member of the FID In 1959, India took over also the secretariate of the committee Since then, Insdoc regularly informs the members of the Federation regarding the work in progress and the results obtained Every year the FID/CA submits the Annual Report of the work done to all the members participating or interested in the work of the committee Uptill now, 11 annual reports embodying the theoretical contributions in the field of depth classification have been brought out

1 Basic Paper on General Theory of Classification

The first report of the FID/CA was submitted to the Rome Conference in 1951 It was a basic document on general theory of classification A full account of it was published in the *Abgila* [R2] The report begins with a classification terminology that was brought into use then It lays bare the unsuitability of an enumerative classification for classifying microdocuments It explains the '*Apupa*' arrangement of recorded materials and its helpfulness The importance of an expressive representation of a specific subject as against a mere extensional one is established The rigidity of notation and its removal are attempted It explains the versatility of an analytico-synthetic depth classification Such a classificatiom uses only a limited number of stable primordial schedules The isolate ideas in the diverse facets of different subjects are taken to be manifestations of the five fundamental categories—Personality, Matter, Energy, Space and Time The fundamental categories strike root at the seminal level They are, therefore, more stable than the primordial schedules themselves. They alone can meet the challenge of the universe of knowledge and of the microthought thrown forth by it at a rapid rate. The concept of [P] [M] [E] [S] [T] has proved to be a happy hit Its potentialities are still being studied and they seem to be endless In fact they have brought order out of choas in classificatory work

2 Optional Facets in Library Classification

Some of the ideas developed in the Library Research Circle at Delhi have been brought out in a series of articles on optional facets in library classification The ninth article in the series is a resume of the results arrived at in the first eight articles [R3] It is also the second report of the FID/CA (1952) The need for special terminology for classification is stressed in this report Many technical terms developed so far in the study of the foundations of analytico-synthetic classification are collected together. A preliminary examination of the versatility of mixed notation is made The report gives a generalised facet formula and probes into the notational potentiality of CC It shows the way for further exploring the foundation, design and maintenance problems of a scheme of library classification

3 Additional Concepts in Idea and Notational Plane

The third report (1953) mentions some additional concepts studied in the idea and the notational plane It was published in the *Abgila* [R5] and the *Review of documentation* [R5] The distinction between whole, part, organ, constituent, and portion and its potency in facet formation are brought out Newly emerging main classes such as Library Science, Museology, Bibliographology, Journalism, and Book Science require a new set of coordinate main classes other than the already enumerated canonical classes They are called "Preliminary Main Classes" or simple 'Prels' The report shows how CC manages partial comprehension of main classes by using Greek letters Some conjectures about proxy among fundamental categories are also given The report explains for the first time how a subject may include many rounds and levels of manifestation of the fundamental categories Array formation and specialisation in the use of octaves are also discussed Some clarification of ideas in regard to phase relation is given. Some of the unsolved problems that came to the notice in the course of the years work are listed Finally, the report deals with the symbiosis between idea and notational planes and the potency of the system of notation used

4 Common Isolate

This topic is discussed in the fourth report (1954) A full account of it was also published in the *Annals of library science* [R6] and the *Review of documentation* [R7] [R11] Common isolate is an isolate idea denoted by the same isolate term and represented by the same isolate number whatever be the host class It prescribes anterior position to approach materials such as bibliography, encyclopaedia, periodical, and yearbook It then discusses time and space isolates and makes a comparison between BC, CC and UDC Time and space isolates are also shown to be common isolates according to the above definition Different levels of each of them are expounded for the first time in two papers in the *Review of documentation* [R12] [R15] Energy isolates can be both special and common The report prescribes the accommodation of common energy isolates in the last octave and in the pre-first octave in CC It gives a sample enumeration of the pre-first octave energy isolates peculiar to each of intellectual, industrial and institutional activities Similarly it recommends the accommodation of physical, chemical, vital and value attributes of material and person in the pre-first octave of matter facet It also suggests the accommodation of common personality isolates in the pre-first octave of personality facet.

5 Mixed Notation and Zones in Arrays

The fifth annual report (1955) comes back to the mixed notation—that is, using as the base of notation several different sets of conventional symbols, fixing definite ordinal values to all of them It is found that CC and UDC had the most mixed notation Of these, CC seemed to have exploited the potentialities of the mixed notation better than UDC The report further examines the way in which the four zones in arrays of different kinds are utilised. An account of it was also published in the *Annals of library science* [R8] It suggests for the first time a use for the second zone of the first order array of the universe of knowledge—that is the array of main classes In the notational plane, the use of packet notation was announced The subject device part of a class number is to be enclosed or packeted within brackets to prevent formation of homonyms in classificatory language It would mean an addition of two extra digits in using Subject Device and it has to be applied in all cases where Subject Device is used whether they give rise to homonyms or not In order to fulfil the Law of Parsimony, Mr Parthasarathy has suggested the omission of arrester member of the bracket pair in prescribed situations [P 1] In implementing this notational device, CC uses circular brackets But UDC has to use square brackets as it uses circular brackets for space isolates and general common isolates This was recommended to the FID at the Brussel's meeting in 1955

6 Zone Analysis and Efficiency Table

The sixth annual report (1956) was turned on examining whether all the potentialities of the mixed notation were fully exploited This led to the design of efficiency table It has been described in the *Annals of library science* [R10] The application of efficiency table to disclose the unused potentiality of a scheme of classification is summed up in the *Annals of library science* [R17] as follows "With this table, it was possible to detect all the zones in an arrary and their respective sectors which were left fallow In connection with each fallow sector, the probability for its never being requisitioned in a certain normal way was carefully examined in the idea plane If there was a reasonable certainty that any sector would not be requisitioned in the normal way, it was available for use in some other way Such an examination some-times brought to mind the possibility of a sector being used in the normal way too Though it has been lost sight of even in the idea plane Work along these lines disclosed that the zones and sectors presented by an array had real correlates in the idea plane Thus, the zones and the sectors are intrinsic in the idea plane itself and contingent on the notational system used In a basic class any sector in any array not needed for utilisation by a special device can be turned over to isolates by enumeration The idea is not to leave any sector fallow "

7 Classification of Commodities and Services

The seventh report dealt with this topic [R 16] With the aid of the efficiency table developed in the sixth report, it is found out that an exhaustive enumeration of the isolates of some arrays does not require the use of chronological and/or alphabetical, and/or subject devices in the sectors 4 to 6 respectively and they may be turned over to the device of enumeration if needed The array of commodities and services has to hold an unusually large number of isolates and it has been a problem in many classification schemes It is found advantageous to give up chronological, alphabetical, and subjects devices in this case and fill sectors 2 to 6 by the device of enumeration Depth classification will get great relief if construction of a comprehensive schedule of commodities and services is accomplished Then there will be left only special isolates which will be comparatively few The schedules for the special isolates can be built up with ease as and when need arises and if they are not already done in current editions of the schemes There should be an over-all master schedule of matter isolates In addition to the schedule of common isolates of properties, the schedule will have to include all kinds of raw materials, ultimate commodities, all stages of intermediate commodities and all services The work to be done will involve scanning the macro and micro literature and making a list of all materials and services They have to be organised into filiatory sub-groups and groups The groups and sub-groups will themselves have to be arranged in filiatory sequence The enumeration of commodities and services has been attempted in the past in the Customs Departments Their list can be taken as the starting point It is estimated that the work will require 100 man-years A schedule like this will be of use to any scheme of classification and in machine retrieval Analytico-synthetic scheme of classification can however derive the greatest benefit

8 Classification of Environmented Entities

An entity whose attributes and behaviour are studied while within an abnormal environment, which is not normal to it, is called environmented entity The eighth report (1958) isolates for the first time the classificatory problems caused by environmented entities and gives a tentative method to meet them It was published in the *Annals of library science* [R18] and in the *Review of documentation* [R19] The problems are firstly to find a helpful place for an environmented entity belonging to any host class and secondly to provide an isolate number for the environmented entity which will implement the decision about its place It suggests the solution of accommodating environmented entities in zone 4 of array of order 1 in first round first level personality It is proposed to represent the environmented entity in the notational plane by subject device To prevent homonyms, environment device will be differentiated from the subject device by the insertion of '0' (Zero) immediately after the starter bracket This device will be of great help in all analytico-synthetic schemes The report finally mentions the work to be done in the construction of a comprehensive schedule of environment numbers for use in various contexts

9 Problems for Pursuit in Classification and Retrieval

The ninth report (1959) discusses the problems for pursuit It was published in the *Annual of library science* [R20] The report begins with an account of the work done in recent past on the theory of classification, including facet analysis, fundamental categories, zone analysis, common isolates, special isolates, and postulational approach Common isolates of time and space have been worked out already [R 12], [R 15], They require testing, improvement, and being placed on a firm footing The work to be done involves constructing schedules for common isolates for energy, matter and personality It is estimated that the common isolates for advance enumeration to be about 1,000 for energy, 10,000 for matter and 100 for personality. The possibility of special isolates becoming quasi-common or seminal for energy is mentioned It is also estimated that the special matter isolates for advance enumeration to be the order of 10^{10} Special personality isolates are many and building of their schedules will be a continuing piece of work in the light of literary warrant The report points out the need for additional principles to facilitate assignment of facets to levels and rounds and for the investigation of semantic problems involved in breaking down composite terms into fundamental constituent ones The problems for pursuit discussed in this report were presented in the *Annual report of the Madras Library Association* for the year 1959 (M1) in a tabular form as given below It shows the enormity of work, time, and cost required in undertaking the task.

Project	*Number of items likely to be scheduled*	*Men years*	*Total*	*Research Fellows*	*Finance*	
					Secretariate	*Travel expenses for Director & Res Fellows*
1 Construction of a fairly systematic schedule of all kinds of action interaction etc Short name (CE) schedule	1,000	2	$7,000	$3,000	$3,000	$1,000
2 Construction of a fairly comprehensive systematic schedule of attributes & values of all kinds Short name (CM) schedule	10,000	3	$10,000	$4,500	$4,500	$1,000
3 Principles for determining consistent and helpful sequence of facets in a subject Short name Facet Sequence		2	$6,000	$3,000	$3,000	
4 Construction of a fairly comprehensive systematic schedule of all kinds of materials—raw, intermediate commodity, and ultimate commodity Short name (SM) schedule	10^{10}	100	$250,000	$150,000	$70,000	$30,000
5 Finding break-even point between composite concepts and fundamental constituent concepts in the different areas of the universe of knowledge Short name breakeven points		Difficult to estimate Provision may be made in the first instance for a team of a Psychologist, a Linguist and a Reference Librarian with experience on floor duty, to work together for two years				

Note

1 The systematic schedules and the principles will be of use in any scheme of classification and secure great autonomy for classifiers

2 Pilot attempts have been made during the last two years in India The methodology for these routine investigations has been found Subject to small variation suggested during the progress of the work, the methodology can be easily applied by a Research-Fellow, working under a Director

3 About 60% of the newly emerging micro-subjects can be classified without difficulty by any trained classifier, if these three projects are completed They will be of equal use in machine retrieval

Note

1 The results of these two projects will be of use to all schemes of classification They will also be of use for Customs Departments in all countries They will be of equal use in machine retrieval

2 Pilot attempt has been made in project 4 The former League of Nations, the UN and some national Governments such as UK have been engaged in this work for some years Trained classifiers can produce better results

3 About 30% more of micro-subjects can be classified without difficulty and all the materials of merchandise can be classified for customs purposes, if project 4 is completed

4 At present, the breakeven point mentioned in project 5 is left entirely to flair This makes classification inconsistent The man-power available for research in classification, design of classification schemes, and actually classifying microdocuments and articles of merchandise is now dissipated a good deal This can be stopped if project 5 produces useful results

5 The good offices of the FID are solicited to secure the necessary funds for the five projects-arranged in the sequence of urgency and increasing period for completion and to get them started

92 Common Property Isolates

The tenth report (1960) brings out the need for establishing an exhaustive schedule of common property isolates for use in depth classification for securing economy in notation. It was also published in the *Annals of library science* [R 22] Common isolates for time, space and commodities and services have been dealt with already in the earlier reports [R12, R15, R16] The Indian study group on classification has been concentrating on the problem of common property isolates and has formed working parties for various areas The present report is the first instalment of the results arrived at and covers mathematical, physical and chemical properties The methods followed for searching common property isolates are firstly approach through literary warrant, secondly approach through verbal plane and thirdly approach through schedule of classification The report shows how the common properties are applicable to various subjects and how it is desirable to enumerate them If a fairly good schedule of common property isolates is established, the schedule of special isolates will get considerably slimmed The mnemonic quality and helpfulness of sequence in the schedule of special isolates will themselves improve by comparing the schedule of common property isolates and the schedules of special isolates in the several basic classes The report gives a tentative schedule of common property isolates roughly correlated to mathematics, physics and chemistry and shows how they are applicable to other shemes of classification as well.

93 Facet Sequence and Telescoping in the Schedule

The eleventh report (1961) was turned on the above problem [R 23] Till now the sequence of the facets of subject has been fixed by pre-determined facet formulae This involved too much of rigidity The present report enunciates postulates of sequence for removing the rigidity of a pre-determined facet formula The subject of a document is analysed on its own merits to isolate its facets The fundamental category of which a facet is a manifestation is determined for each of the facets The postulates of sequence says that the basic facet of the subject should be put first and the other facets should be arranged thereafter in the sequence of the decreasing concreteness of the fundamental categories of which they are respectively taken to be manifestations, provided there is not more than one basic facet and not more than one manifestation of any fundamental category The report also brings out the problems relating to the assignment of an isolate facet to its appropriate round and level respectively It has been till now-pre-determined in a rigid way The report shows how this residual rgidity is removed by the following five principles:

1 Commodity—raw material—transformation principle,
2 Wall-picture principle,
3 Act-and-action-actor-tool principle,
4 Cow-calf principle, and
5 Whole-organ principle.

The five principles may prove to be sufficient to determine the helpful sequence of facets uniquely in most of the subjects However, additional principles may have to be formulated to meet cases where they prove to be insufficient Another subject discussed in the report is the use of zone analysis and telescoped schedules in host classes Tentative sample schedules for library classification, library cataloguing, and chemical analysis are given using the notation of CC Examples of telescoped schedule taken from the facets of these three host classes are also given

94 International Summer School on Design of Documentary Classification

At the Brussels' Conference of 1955, a suggestion was made to the FID to arrange for an international seminar of about a month's duration on depth classification to consolidate and disseminate the results of recent years and to chalk out programme for the future At the request of the FID, Dr Ranganathan worked out the details of the seminar and it was published in the *Review of documentation* [R9] Though such a seminar did not take place, the idea helped to hold subsequently in 1957 an international study conference on classification for information retrieval at Dorking

95 Dorking Conference

A conference on classification for information retrieval was held in May 1957 at Dorking, England at the suggestion of the FID It was organised by

Aslib The object of the conference was "to study some of the modern ideas on classification which are largely due to Dr Ranganathan of India and their application to information retrieval" Dr Ranganathan attended the conference and delivered the opening address [R13] It was also reproduced in the *Annals of library Science* [R14] as an article on "Library classification as discipline" Some very useful conclusions and recommendations were made at the conference from the point of view of information retrieval

96 Telescoping of Facets and Mixed Notation

This was the topic of paper contributed by Dr Ranganathan in the columns of the *Review of documentation* [R21] in honour of Mr Donker Duyvis who retired after 36 years of meritorious service as Secretary-General of the FID Telescoping will secure economy in notation without affecting the co-extensiveness of class number It will cause economy in coding for machine search also Not only consecutive arrays in a facet but also facets belonging to consecutive levels can be telescoped Telescoping the UDC schedules is unhelpful due to fusing of basic class number with isolate number On the other hand mixed notation of CC admits three kinds of telescoping In the first kind, the first level of [P], the special, and the systems are telescoped The second kind of telescoping is in relation to the principle of increasing concreteness The third kind of telescoping is in relation to the canon of decreasing extension

97 Conclusion

A brief review of the work done by Dr Ranganathan in the FID has been attempted in this contribution. The findings of the FID/CA committee are applicable to and can be adapted to any scheme of classification They are of such fundamental importance that any scheme of classification devoted to classify micro-thought has to adopt them sooner or later The FID has officially adopted the octave notation and packet notation Interest on the technique developed in India is spreading to other schemes too Dr Ranganathan's work at the FID/CA shows how he has been carried deeper and deeper into the depth classification needed for documentation He has shown the rich potentialities of a faceted, analytico-synthetic classification with a mixed notation It is gratifying to note that the contributions made by him to the development of a theory of classification have been generally accepted all over the world

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Note.

1 The author of the documents cited against reference number beginning with alphabet R is S R Ranganathan.

2 The first column gives the reference number occurring in the text The second column gives the number of the section of the text, where the reference number occurs The third column gives the reference with its locus

postulates of sequence for removing the rigidity of a pre-determined facet formula The subject of a document is analysed on its own merits to isolate its facets The fundamental category of which a facet is a manifestation is determined for each of the facets The postulates of sequence says that the basic facet of the subject should be put first and the other facets should be arranged thereafter in the sequence of the decreasing concreteness of the fundamental categories of which they are respectively taken to be manifestations, provided there is not more than one basic facet and not more than one manifestation of any fundamental category The report also brings out the problems relating to the assignment of an isolate facet to its appropriate round and level respectively It has been till now-pre-determined in a rigid way The report shows how this residual rigidity is removed by the following five principles:

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CHAPTER H2

Dr Ranganathan and Standardization

LAL C VERMAN

1 Talents and Genius of Ranganathan

It is a matter of privilege and a source of personal pleasure for me to be able to offer my warmest greetings to Dr S R Ranganathan on this memorable occasion when his 71st birthday is being celebrated by his friends, colleagues and admirers all over the world. Let me take this opportunity to assure him that every Indian who has any interest in libraries, library science, documentation or any allied field takes a justifiable pride in being the fellow countryman of Dr Ranganathan whose talents and genius have contributed so much to the advancement of knowledge in the world. It is only in the fitness of things that this "Festschrift" is being presented to him.

2 Insight and Youthful Vigour

My own association with him dates back to 1947 when the Indian Standards Institution was first set up and when he was busily engaged in building up a new school of library science at Delhi University. From the very beginning I was greatly impressed by the keen insight and youthful vigour and enthusiasm he brought to bear on any problem that was presented to him. It is indeed remarkable that up to date he continues to remain cheerfully active and intensely creative.

3 Standards on Documentation

In its very infancy, the Indian Standards Institution was faced with many new tasks and many new responsibilities. The field of standardization was one in which none of us had had much experience. Among other problems there was the question as to what extent India could and should take active part in the work of the International Organization for Standardization (ISO) which had come into being only a year before ISI and whose job it was to promote international standards through co-ordination of the existing national standards. Among other subjects there was one dealing with documentation about which little was understood in India. It was Dr Ranganathan who came forward with his characteristic optimism backed indeed by his deep insight to guide the ISI work on documentation, which later led to the formulation of several international recommendations on standardization in this field Special mention in this connection may be made of the "Layout of Periodicals" and the "Abbreviations of Titles of Periodicals," where ISO Recommendations drew considerably from the Indian Standards Another field in which ISI has provided working documents for formulating international recommendations by ISO is the "Preliminary Pages of a Book" The National Standards formulated by ISI cover the general structure of preliminary pages, contents, half-title leaf and title leaf

4 Standard on Proof Corrections

An Indian Standard of considerable interest and value prepared under Dr Ranganathan's guidance is that on proof corrections Because of historical reasons and the fact that English has been the dominant language in the country for a fairly long period now, British proof correction symbols have been in vogue But some of them consist of English terms and words like "see copy," "take over", etc To make the Indian Standards applicable for all the regional languages in the country, all such linguistic symbols have been replaced by suitably devised non-linguistic ones

5 Library Terminology

A work of real importance now being processed through the initiative taken by Dr Ranganathan as Chairman of the ISI Committee on Documentation concerns the standardization of library terminology With the large increase in literacy and the phenomenal development of libraries in the country, there is a need, at the present time, to have authoritative and comprehensive glossaries for the guidance of technical staff engaged in such libraries An Indian Standard Glossary of Cataloguing Terms has already been published Another glossary, namely that of classification terms—a most useful and comprehensive document of some 100 pages—has also been issued in wide circulation It is worth noting that it is the first time that an organized effort has been made in this draft Indian Standard to clear the prevalent chaos about the definitions of terms used in the library field by different schools and in different parts of the world

6 Library Buildings, Fittings, and Furniture

The other Committee which works under the chairmanship of Dr Ranganathan, namely, the Library Buildings, Fittings and Furniture Sectional Committee, is also doing useful work of laying down guiding principles for builders and architects engaged in the construction of library buildings

7 Savant of International Stature

We in ISI appreciate very much the tireless efforts Dr Ranganathan has been putting forth in developing national standards for documentation, library buildings and allied subjects, which in turn serve as building bricks for international standardization It is through such efforts that ISI has come into prominence in the international sphere. Not only has ISI gained in stature but India can proudly hold up her head in the comity of nations, because she has given birth to a savant of such stature Let us all join together in the prayer that he may live long, enjoy the best of health and maintain the stream of valuable contributions to the advancement of knowledge

CHAPTER H3

Dr Ranganathan and Standards for Documentation

JAINATH KAUL
AND
GURCHARAN SINGH

0 Introduction

THE role of effective leadership in the business of preparing national standards in the field of documentation has been played with great credit by Dr S R Ranganathan during the past fifteen years.

01 NECESSITY FOR STANDARDS

In 1946, the ushering of Indian independence in the following year had become a settled fact. That this independence would be a prelude to tremendous industrial development and progress to achieve national prosperity and a decent standard of living for the common man, was the general expectation. The necessity for standards in increasing numbers to regulate and coordinate rapid expansion of quality producing industrial units with large scale utilization of indigenous resources and raw materials and to eliminate waste as completely as possible was keenly felt all round.

02 INDIAN STANDARDS INSTITUTION

This was the background in which the Indian Standards Institution began functioning in January 1947. The object of ISI, *inter alia,* is to prepare and promote the general adoption of standards at national and international levels, and the Institution has since its establishment published over 2300 Indian Standards.

021 ORGANIZATIONAL SET UP

The affairs of the Institution are managed by a General Council, and an Executive Committee (EC) appointed by it. The technical work of ISI is carried out through its seven Division Councils, each responsible for a major section of the industry, namely, Agriculture and Food Products, Building, Chemicals, General Engineering, Electrotechnical, Structural and Metals, and Textiles

022 SECTIONAL COMMITTEES

The standards are prepared by sectional committees appointed by the Division Councils or the Executive Committee A sectional committee is representative of various interests concerned with its specific scope The members of a sectional committee are drawn from all over India Mostly, they are renowned experts in their respective fields working in various Government departments, technical organizations, manufacturing firms, research and testing laboratories, etc

1 Documentation Standards

That ISI was able to devote attention to the subject of documentation from the very beginning of its career was mainly due to Dr S R Ranganathan Through his writings and the force of his personality, he had been able to stress the importance of standards for documentation in conserving energy otherwise wasted in information retrieval It was recognized that national independence was bound to lead to the release of considerable creative energy, which, in turn, was to lead to the emergence of new thinkers, scientific workers, etc Further, in the context of rapid industrial expansion and great increase in the number of research laboratories, the necessity of collecting nascent thought being created from day to day all over the world and making the same available to the workers in the different specific fields expeditiously, exhaustively and pin-pointedly could hardly be overlooked

11 DOCUMENTATION SECTIONAL COMMITTEE

All this resulted in the setting up of Documentation Sectional Committee (EC 2) by the Indian Standards Institution as early as 15 October 1947 The Committee works directly under the Executive Committee, and is one of the oldest among the one thousand sectional committees, subcommittees and panels of ISI functioning at present

12 CHAIRMAN OF EC 2

As was natural, Dr Ranganathan was invited to be the first Chairman of EC 2, and he has continued in that capacity ever since The Committee has a number of subcommittees which have held numerous meetings so far The Committee itself has met 18 times beginning from the inaugural meeting on 12 April 1948. The membership of the committee is representative of associations of libraries, organizations leading in documentation work, publishers and printers, in the country The present composition of the committee is given in Appendix A.

13 ACHIEVEMENTS

131 THE WORK ACCOMPLISHED

The Documentation Sectional Committee has already formulated the following Indian Standards

1	IS	4-1949	Practice for make-up of periodicals,
2	IS	18-1949	Abbreviations for titles of periodicals,
3	IS	382-1952	Practice for alphabetical arrangement,
4	IS	790-1956	Specification for general structure of preliminary pages of a book (*tentative*),
5	IS	791-1956	Specification for half-title-leaf of a book (*tentative*),
6	IS	792-1956	Specification for title-leaf of a book (*tentative*),
7	IS	793-1956	Practice for author statement in the title page of a book (*tentative*),
8	IS	794-1956	Practice for table of contents (*tentative*),
9	IS	795-1956	Canons for making abstracts,
10	IS	796-1959	Glossary of cataloguing terms,
11	IS	1250-1958	Proof corrections for printers and authors,
12	IS	1275-1958	Rules for making alphabetical indexes,
13	IS	1358-1959	Practice for layout of library catalogue code, and
14	IS	2381-1963	Recommendations for bibliographical references

132 WORK IN HAND

The following draft standards are due to go to press in the near future

1 Guide for the layout of periodicals,
2 Specification for title-page and back of title-page of a book, and
3 Glossary of classification of terms

The first is a revision of IS 4-1949 Practice for make-up of periodicals The second is a revised version of IS 792-1956 Specification for title-leaf of a book (*tentative*) and IS 793-1956 Practice for author statement in the title-page of a book (*tentative*) which have been amalgamated in the revision The third is a monumental work running into some 100 pages and is a first attempt of its kind in the world to establish standard definitions of terms used in the field of classification for clearing the prevalent chaos and avoiding annoying misunderstanding between persons working in allied fields. A draft standard on Principles for designing a scheme of library classification has also been finalized

The draft Specification for Reinforced library binding has been circulated widely among parties interested in its subjects for comments The comments will be taken into account when the standard is finalized for publication

133 FUTURE PROGRAMME OF WORK

The future programme of work of the Committee is to prepare Indian Standards concerning the following:

1 Layout for the text of a book,
2 Abbreviations for the titles of periodicals in Indian languages,
3 Code for classification of metal working machinery,
4 Layout of articles in periodicals, and
5 Standard for the style of writing entries in a catalogue in Indian languages

The revision of the following standards already published is also contemplated:

1 IS 18-1949 Abbreviations for titles of periodicals,
2 IS 382-1952 Practice for alphabetical arrangement,
3 IS : 790-1956 Specification for general structure of preliminary pages of a book (*tentative*),
4 IS 791-1956 Specification for half-title-leaf of a book (*tentative*), and
5 IS 794-1956 Practice for table of contents (*tentative*)

The first draft for the revision of IS 382-1952 has already been prepared

2 **Standards Conventions**

Annually, ISI holds a Standards Convention in different parts of the country The purpose of these conventions is not only to bring together various experts on a common platform to iron out various problems concerning standardization but also to create a general standards consciousness among the masses The conventions are divided into various technical sessions

21 DOCUMENTATION SESSIONS AT STANDARDS CONVENTIONS

Under the chairmanship of Dr Ranganathan, four documentation sessions have been held so far, two of which had met at the third Convention in Madras in 1957, the third at the fifth Convention in Hyderabad in 1959 and the fourth at the sixth Convention at Kanpur in December 1961.

22 MADRAS CONVENTION

At the Madras Convention, a complete search was made of documentation from the production of books, periodicals and other documents to documentation service. One important subject discussed and finalized at this Convention was proof correction symbols Due to historical reasons, the country has been using the British proof correction symbols While they are quite satisfactory generally, it was felt that the 15 or 20 linguistic symbols using English words like "spell out", "see copy," "take back", etc , should be replaced by suitably designed non-linguistic symbols so that they could be applied by all presses in all parts of the country regardless of the language This remarkable achievement has been made and this Indian Standard is now being used by a number of leading Indian presses and is becoming increasingly popular Another noteworthy feature of this convention was the pictorial representation of the whole field of documentation put forth for the first time by Dr Ranganathan which clearly demarcated the regions already standardized, those awaiting to be standardized and the residue not amenable to standardization An up-to-date version of that is given in the figure on page 278

23 HYDERABAD CONVENTION

At the Hyderabad Convention, attention was chiefly focused on the areas left out at the Madras Convention The work was mainly centred round three topics, *ie* production of a book or a periodical, indexing and bibliographical citation, and classification and cataloguing

24 KANPUR CONVENTION

The subject at the Kanpur Convention was the housing and preservation of documents The problems discussed included optimum light required for comfortable reading, air treatment for increasing the life of a book in a library, the treatment to be given to the records in archival libraries, frequency of weeding out ephemeral literature, the method of arranging them for quick retrieval, and the problem of reinforced library binding

3 Storage of Documents

At the Madras Convention, it was pointed out that there was a big field of library architecture where standardization could play a very useful role The importance of this subject is to be judged from the extensive schemes which the Government of India, the State Governments and the University Grants Commission have underway for the development of library facilities and setting up of new libraries throughout the country The object of standardization in this field would be to make libraries functionally efficient and economical

31 LIBRARY BUILDINGS, FITTINGS AND FURNITURE SECTIONAL COMMITTEE

Accordingly in 1958, the Building Division Council of ISI set up the Library Buildings, Fittings and Furniture Sectional Committee (BDC 27). Dr Ranganathan was appointed the Chairman of this Sectional Committee also. The Committee has already issued an Indian Standard, namely, IS 1553-1960 *Code of practice relating to primary elements in the design of library* *buildings* Another Indian Standard, namely, IS 1829 (Part I)-1961 *Specification for library furniture and fittings, Part 1 Timber* has also been brought out

4 International Standards for Documentation

The international standards for documentation are laid down by the Technical Committee ISO/TC 46 Documentation, of the International Organization for Standardization (ISO). India takes active interest in the work of this committee and strives hard to see that the problems of the fast developing Asian countries are taken adequately into account while international standards are being formulated. On behalf of India, Dr Ranganathan has participated in the various meetings of ISO/TC 46 The draft standards circulated by ISO/TC 46 are minutely studied and comments, if any, forwarded to it. Needless to say, these comments have always been highly valued by ISO/TC 46, and in many instances the alternative proposals submitted by India have gone to form the basis of the international recommendations on the subject In some cases, as in the following, ISO Recommendations have followed the formulation of Indian Standards and have derived considerable assistance from them

1 IS 4-1949 Practice for make-up of periodicals, and
2 IS 18-1949 Abbreviations for titles of periodicals

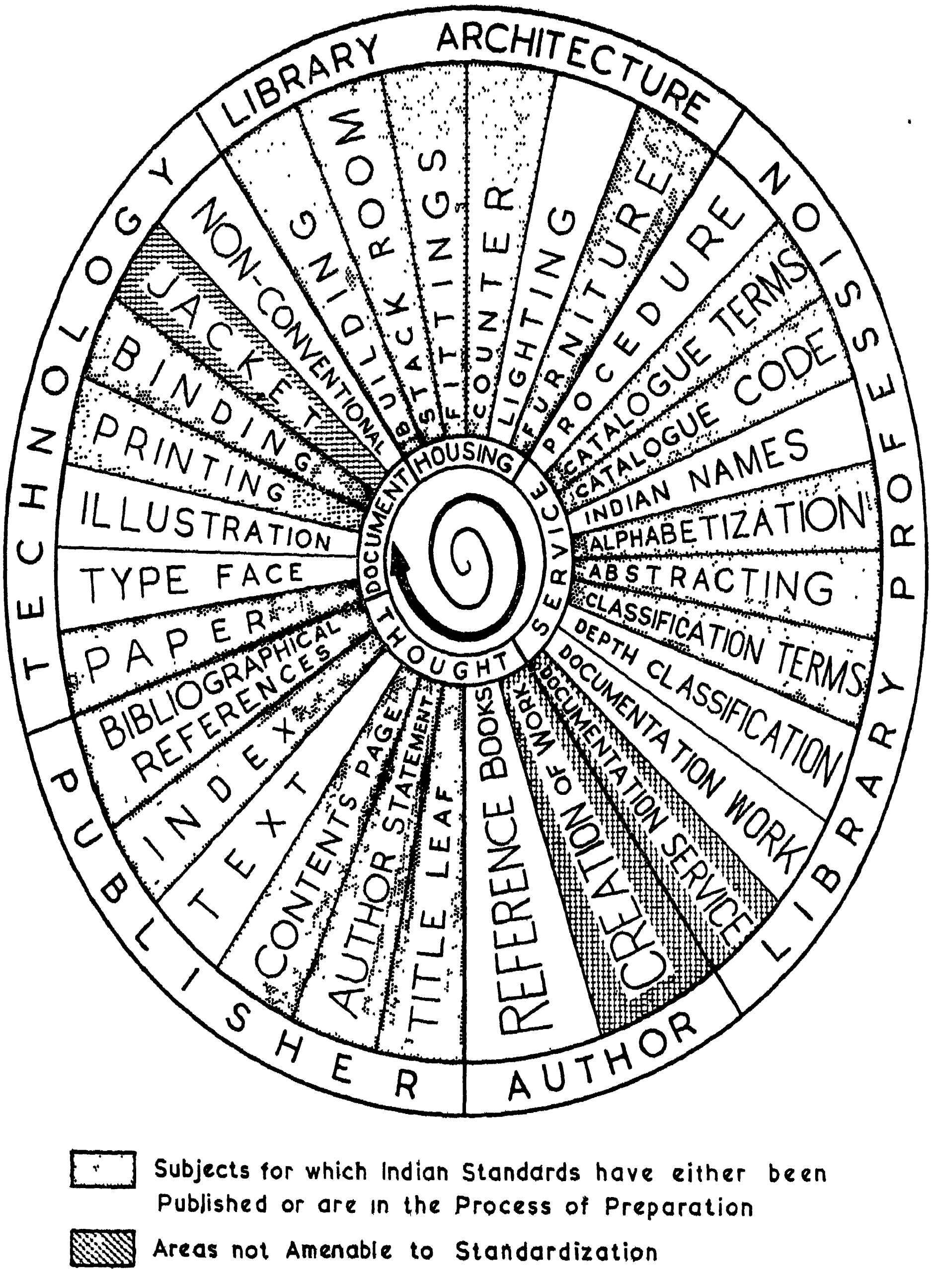
APPENDIX A

COMPOSITION OF DOCUMENTATION SECTIONAL COMMITTEE, EC 2

Chairman	*Representing*
Dr S R Ranganathan	(In personal capacity) 307/3 4th Main Road, Bagalore-3
Members	
Mr N C Chakravarty, Librarian, Ministry of Finance, New Delhi	Indian Association of Special Libraries and Information Centre
Mr B L Bharadwaja (*Alternate*), Librarian, Planning Commission, New Delhi	
Mr S Das Gupta, Librarian, Delhi University Library	University of Delhi, Delhi
Mr S Ramabhadran (*Alternate*)	
Mr Dhanpat Rai, Tech Librarian, Defence Science Laboratory, Delhi	Indian Library Association, Calcutta
Mr Norman A Ellis, Superintendent	Baptist Mission Press, Calcutta

Members	*Representing*
Mr Girja Kumar, Librarian	Indian School of International Studies, New Delhi
Mr R C Gupta, Assistant Director	National Archives of India, New Delhi
Mr A N K Aiyanagar (*Alternate*), Librarian	
Mr R E Hawkins	Oxford University Press, Bombay
Mr B S Kesavan, Librarian	National Library, Calcutta
Mr N M Ketkar, Librarian	Central Secretariat Library, New Delhi
Dr D B Krishna Rao, Librarian	Indian Council of Agricultural Research, New Delhi
Dr P Kachroo (*Alternate*), Editor (Research)	
Mr U S Mohan Rao, Director (Production)	Publication Division, Ministry of Information & Broadcasting
Mr G Nanja Nath (*Alternate*), Deputy Director (Production)	
Mr B S Naik, Deputy Director, Directorate of Printing & Stationery, Bombay	Printing & Stationery Department, Government of Maharashtra, Bombay
Mr A Neelameghan Librarian	Hindustan Antibiotics Ltd , Pimpri
Mr S Parthasarathy	Indian National Scientific Documentation Centre (INSDOC), New Delhi
Mr S Ramu	All India Federation of Master Printers, Calcutta
Mr H K Dass (*Alternate*), The Eagle Lithographing Co Private Ltd , Calcutta	
Mr R S Saxena, Librarian, Roorkee University Library	University of Roorkee, Roorkee
Mr B N Sastri, Chief Editor	Council of Scientific & Industrial Research, New Delhi
Mr A Krishanamurthi (*Alternate*), Editor, Journal of Scientific and Industrial Research	
Mr C S Sivaraman, Librarian	Federation of Indian Chambers of Commerce & Industry, New Delhi
Mr R Subbu, Production Manager	Commercial Printing Press, Bombay
Mr P H Vaidyanathan, Secretary	Central Board of Irrigation & Power, New Delhi
Mr Jainath Kaul, Chief Editor, ISI	Director, ISI (*Ex-officio Member*)

Secretary
Mr Gurcharan Singh
Extra Assistant Director, ISI



EVOLUTE OF DOCUMENTATION

CHAPTER H4

Some Thoughts on Machines

HERBERT COBLANS

0 FID Citation

WHEN Ranganathan was created an Honorary Member of the FID in 1957, the citation read :

> "...his many important contributions to library science and his creation of the Colon Classification as well as his multiple activities in promoting the intellectual and cultural co-operation between the Eastern and Western World."

1 Revolution in Classificatory Concepts

It should be stressed that Ranganathan did not just create another classification; he has made far-reaching contributions to the twentieth century revolution in classificatory concepts. His influence in this field has been immense. To understand its significance, it might be helpful to look at the recent history of information storage and retrieval, as a part of the more general field of data processing and information theory.

2 Computers

The latest[1] in the series of descriptive reports on research and development in scientific documentation compiled by the National Science Foundation lists about 200 distinct projects in different parts of the world. It has been estimated that American industry is now spending about two million dollars a year on systems for the retrieval of information using computers of one sort or another. Coming nearer home, there is the announcement four months ago that the Council on Library Resources of Washington has provided a grant of a 100,000 dollars to the Library of Congress "for a survey of the possibilities of automating the organisation, storage, and retrieval of information in a large research library." This survey will be undertaken by a team of experts under Dr Gilbert W. King, the Director of Research of the IBM Corporation.

21 REJECTION OF COMPUTERS

There are still a number of sceptical voices concerning all this machine activity. In 1956, Mortimer Taube[2] from the practical side was saying

> "Butter isn't any good for a watch even if it's the *best* butter and digital computers are not storage and retrieval devices even if they can compute in milliseconds "

Bar-Hillel[8], a pioneer in information theory, in a report last year, says quite bluntly:

> "All attempts made so far at establishing a general, mathematical theory of literature searching must be regarded as failures "
> "Short-circuiting reference-providing by directly scanning an encoded document collection with the help of high-speed electronic computers is rejected "

22 USE OF COMPUTERS

To place this paradox in the setting of the work of Ranganathan, I shall briefly mention some of the striking uses of computers in fields related to scientific documentation If a machine system is partly to replace the human documentalist, it must be possible to simulate "behaviour" in a machine which would be called "learning" in human beings As a result of suitable programming the machine must be able to choose the best path by a sort of trial and error process and improve its performance as more and more parameters are fed into it Two examples of such "learning" have been reported recently from the research laboratories of the IBM

(*a*) An IBM 704 was able to prove rigidly that the base angles of an isosceles traingle are equal, by a method more elegant than that used by Euclid[1]

(*b*) An IBM 709 in which 50,000 possible boards of draughts were stored was, 'trained' to be able to improve its play until it could beat all amateurs However it was not successful against professional draughts players This failure was explained by the fact that the right concepts of the *structure* of the game are not understood For Chess this *structure* is immensely more complicated and thus the machine cannot "learn" enough to beat even a good beginner.

3 Mechanical Translation

The mechanical translation of natural languages involves analogous problems There are already a number of computers in different parts of the world with a sort of dictionary storage which allows what might be called a one-to-one matching of words and simple phrases in two languages. Typical of this crude type of translation is an IBM machine with a large and fast memory, which translates "Pravda" on a daily basis into a pidgin English which is broadly understandable.

For "real" translation the natural languages have to be studied in great detail including semantic analysis and syntactic relations between words. Such projects are being undertaken by a number of research units especially in European institutions[1]. Until the *structure* of natural languages can be established in terms of machine programming no really adequate translations can be produced by machines.

4 Efficiency of Machines

Another way of improving the efficiency of machines is to increase their speed and storage capacity. Reverting to the draughts-playing machine it is clear that, if 500 thousand instead of 50 thousand possible boards were stored, the machine would "play" better. Speed and storage thus become crucial determinants in a purely economic sense. The big new computers that are now coming on to the market cost about three million dollars each and carry out more than one million operations per second. And because the speed of light is now becoming a limiting factor for this new generation of computers, much research is directed towards miniaturization, so as to cut down the circuit lengths etc. From a technological point of view there are extraordinary developments ahead, new types of transistors, thin magnetic fields (layers of a few hundred atoms), systems based on supraconductivity (at temperatures around that of liquid helium). I mention these to show what is being done, but at the same time to emphasise at what cost.

The other aspect of the efficiency of data processing machines is the conceptual content, the *structure* of the data to be handled. The draughts-playing machine can be improved by an immense investment in speed and storage or by achieving new insights into the *structure* of the game. For information retrieval structure is essentially *classification*, and it is Ranganathan who made the first break-through in classification theory which provides possible structural techniques for handling scientific information.

5 Originality and Distinction of Ranganathan

But as Taube[3] and Bar-Hillel[3] have said, we are still a long way from the automatisation of subject control. The Ranganathan concepts of facet analysis, fundamental categories, canonical order, chain indexing, to mention but a few, have opened up new horizons for classification. Until these have been fully assimilated and applied in "machine" contexts, just improving the hardware will not mean real progress. In other words hope lies not so much in bigger and faster machines, but in deeper insights into the structural patterns of recorded knowledge and the practical techniques of classification and indexing which follow To Ranganathan belongs the great originality and distinction of pioneering this new classification

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CHAPTER H5

An Aspect Regarding Quantification Method for Selection of Bibliographical Vessels

SHIGENORI BABA

0 Introduction

SINCE long years, many researchers are engaging to find out eventual quantification method for selection of bibliographical vessels (in short: bibliovessels) and have reported their results obtained from their own view points (Table I).

Some of them are quite interesting not only to users but also for librarians and documentalists who are engaging in literature selection works, although some of them are either said to be too general in their nature or somewhat too broad in territorial treatment (to territorializationing or domaining microscopically classified by which may only be met with request from researcher).

To just meet with specific, narrower, and microscopic literal request from researcher concerning his own specific research item or territory, or to organize primary and also higher-ordered literature structure for such territory, some other quantification method of selection should be worked out.

1 Outline of Survey done on Citation Counts and Related Items

In "Electrical Engineering" territory, *Journal of Institute of Electrical Engineers of Japan* is taken as a typical sample for analysis. This journal consists of 12 issue constituting a volume. In other word, this is a monthly journal. Each issue consists of 10 papers and several other secondary literature, such as, literature review articles, special subject bibliographies, classified documentation, patent documentation, and others.

In this survey, primary literatures are only treated for analytical purpose, for the avoidance of complexities thought to be arisen. From view point of physical forms of this journal, as volume—structured territory—is consisted of 12 issues—substructured territory—in which more than 10 different papers—elementary territory—are published. Each paper has its own classified field—microscopic in its nature—with list of literatures cited. And also this literature cited has its own classification number in DC or CDU classification field inherent to its own bibliographical nature, in terms of "bibliovessels" so that one can express this with classification code met with its (bibliovessel) title properly given

Data sheet is prepared in which

CDU number of title Territory
Title of original article
Institution to which author belongs
CDU number of the journal cited Bibliovessel
Title of the journal cited in abbreviated form Bibliovessel
Year of the journal cited Bibliovessel

Same titled journals are collected under the one same title, so that CDU number of the journal, title of the journal and years of publication occurred are entered under this title.

11 TABLE I CHRONOLOGICAL LIST OF “CITATION COUNTS METHODS PROPOSED IN THE PAST

1927	P L Gross	(Chemistry)
1929	E S Allen	(Mathematics)
1930	MacNeely	(Electrical Engineering)
1931	P L K Gross	(Geology)
	Gross & Woodford	(Geology)
	R J Jenkins	(Medical Science)
1932	K K Sherwood	(Medical Science)
1935	R H Hooker	(Science)
1936	J Hackh	(Medical Science)
1937	C F Dalziel	(Electrical Engineering)
	J W Hunt	(Medical Science)
	J Gregory	(Medical Science)
1938	H H Henkel	(Biochemistry)
	Lancaster Jones	(Science & Technology)
	C F Dalziel	(Electrical Engineering)
1944	E Brodman	(Medical Science)
	M H Smith	(Chemistry)
	Association of Research Libraries	
1947	E J Crane	(Chemistry)
1948	J D Bernal	(Science)
	D J Urquhart	(Science & Technology)
1949	H H Fussler	(Physics)
1950	D E Gray	(Physics)
	D E Scate	(Science & Technology)
	Welch Medical Library	(Medical Science)
	University of Kentucky Library	

1951	A Schauber	(Physics)
	J G Tolpin	(Science)
1952	C W E Hintz	(Biology)
	R C Coile	(Electrical Engineering)
1953	R S Daniel	(Medical Science)
	S C Bradford	
	R E Stevens	(Biology)
1954	S Herner	(Science)
	B Glass	(Biology)
	University of Michigan	(Medical Science)
	M F Tauber	(Technology)
1955	W A Baum	(Geology)
	P M Morse	(Physics)
	A D Osborn	
	R W Orr	(General)
	F B Jenkins	(Science)
1956	C H Brown	(Science)
	C G Bush	(Science)
	R H Hoop	(Science & Technology)
	R R Shaw	(Science)
	Shigenori Baba	(Medical Science)
1957	University of Chicago	(Mathematics)
	C M Louttit	(Science)
	R L Barrett	(Chemistry)
	Shigenori Baba	(Library Science)
	Shigenori Baba	(Electrical Engineering)
1960	P Stabler	(Physics)

When this analysing work is done, list of titles of periodicals treated from the view point of occurrence in citation with reference in their year of publication is prepared in order of occurrence frequencies, from larger one to smaller ones

This data sheet thus prepared is named "territorial analysis sheet" or "elemental territory—title—occurrence frequencies with year of publication chart"

Other titles in the same issue are also treated one by one like this and same sheets are prepared respectively All the data sheets thus prepared are summed up in reference to same CDU number of elemental territory in one sheet then, and this makes a data sheet for sub-structured territory with its components (elemental territories), ie the issue analysed

Journal of I E E of Japan is a monthly periodical as described above so that a volume is consisted of 12 issues—a structured territory 12 data sheets from the issues of January to December issues are summed according to the same process as above up into one data sheet for the volume—the structured territory.

In this case, two kinds of methods of summation are taken, one of which is list arranged according to CDU number and the other is CDU number and name of titles cited according to the occurrence frequencies (number of citations)

From this list, a periodical or several periodicals which is or are very oftenly used of occurred in citation is or are found and may be defined "core journal" or "core journals" which occupy more part of the literature structure in this territory, i e quite important journals in its field The "coreness" of the journal defined as "core journal" can be checked by the same analysis on other journals in the same CDU number, i e,

OHM,
Journal of Waseda Electrical Engineering Society
etc,

whether the same periodical or periodicals occupies or occupy position of most cited periodicals in the same lists for OHM, Journal of Waseda Electrical Engineering Society, etc. Such "core journal" is defined as "followable core journal"

2 Citation Counts vers Years of Publication Curve in each Research Item

Data obtained by citation counting in January 1961 gives the following specific characteristics in life curve of literature used in specific discipline in terms of bibliovessels—"number of citation counts vers year of publication of bibliovessels concerned"—(Fig I)

In the territory "Chemistry", the life curve (*viz* life curve of the literature) suddenly rises up between 1956 and 1957 This means that from the time point January 1961 (January—December 1960) chemical literature's life is near 4 2 years long within which chemical literature is actively and oftenly used Same life for "Geology" and "Electrical Engineering" are nearly endless and 7 5 years respectively These phenomena tell us, there are certain life limit of literature from the view point of citation in specific territory

Same curves for 1960, 1959, etc can be obtained in the same way as in Fig II By plotting inflection point, in other words, point of sudden increase, on those curves, "the life limit above vers year (A D)" relation from the view point of year length of life referred to the year analysis being done, may be obtained as in Fig III, from which nearly linear relation can be observed.

This line shows us that within recent 12 years, year length of life is becoming shorter (from 10 years in 1949 to 4 2 years in 1961)

Same tendencies may be observed in other diciplines, *viz* in Engineering, Agriculture, Medicine, and other experimental or rapidly expanding disciplines, generally.[1]

3 Characteristic Distribution Curve of each Research Item

At the same time, literature in the terms of bibliovessel cited in the specific or microscopic research item has characteristic distribution curve which may be shown on Dewey or Universal Decimal Classification (CDU) field, ie Fig IV

This distribution curve expresses that literature structure for 621·3 in the year of 1960 is consisted of either different components or densities (number of citation or number of occurrence of bibliovessels) in related classification numbers given to the bibliovessels cited along the said field

CDU 621 3 journals in U S, U K, France (1960) are also treated in same way, and the same distribution curves were obtained as shown in Fig VI, with which Japanese data obtained above is also added for the convenience of comparison between those The journals analysed here were

U S	Electrical Engineering
U K	PIEE
France	Revue General d'Electricite

In the same way, similar data can be obtained from the view point of number of citation counts, year, analysis being carried out, and CDU field, from which Fig V is prepared This Figure shows a distribution curved surface, and tells us the secular changes in distribution curves visually

Degree of segregation in 621 3 decreases gradually up to 1960, while degree of dispersion becomes larger up to 1960, relatively

4 Characteristic Distribution Curved Surface of each Structured or Composite Research Item

Each microscopic item has its own distribution curve as shown above Followingly, so that in a composite or structured territory (i e 621 3—621 37—621 39) a group of such curves can be obtained which then form curved surface inherent to the structured territory considered

Same curved surfaces and projection curve of those curves inherent to U S, U K, France and others can be obtained in the same way Comparison of curves between those including Japan directly visualises the difference between each other This difference imply, on one hand, difference in accentuation in research weight while on the other hand, difference in segregation or dispersion in related disciplines in reference to the main disciplines For example, characteristic curve inherent to Japan is rather segregated at CDU 621 3 and quite lightly dispersed to related disciplines on the same classification field from the point of occurrence frequencies shown in Fig IV.

In this case, if Japanese researcher is wishing to have literature structure on international level in this moment, he should have literature structure meeting with the projected curve of the curves of U S, U K, and France with Japan, in Fig VI.

5 Resultant Characteristic Distribution Curve of Structured or Composite Research Item (CDU 621·3+621·37+621·39)

If projection on a plane perpendicular to main CDU field axis and parallel to the planes on which those distribution curves are drawn being taken, a projected (fictive) curve may be obtained, similarly, which shows the required distribution curve of literature structure meeting with the request from the microscopic research territory in the said time limit

The interpretation of this projected curve is as follows

Up to point A—cross point of curves CDU 621 3 & 621 37—on the projected curve, the literature structure desired is same as of 621 3 curve, while further points part from A, the literature structure desired follows the curve of 621 37 because the projected curve thus obtained in this case is composed of two components curves which are inherent to 621 3 and 621 37 respectively

Practically speaking, list of periodicals desired can be obtained by combination of the two lists of 621 3 and 621 37 by avoidance of duplication in same title of the periodicals listed in both lists

6 Analysis of the Projected Curve and Synthesis of the Curve by Combining or coordinating Elemental Collections or Libraries' Holding

This projected curve, at the same time, can be decomposed into several elemental curves, as shown in the Fig VII which means the possibility of dynamic combination of different specific collections or libraries (A, B, C,) in each related territory so that the requested literature structure might be realized by setting up cooperative relationship between those or by providing union catalogue of the holdings in those from time to time from local, national and international view point of selection and mutual use of literatures in the specific territories concerned

7 Present-day Literature Service

As already pointed out by authorities in those fields, concerned, present-day literature service is heavily requested by researchers with dynamically changing secondary literature survey service and newest, active and indispensable literature structuring service—finding out of new bibliovessels, and putting them into possible status of contents accessions by them—on national and international level and research frontiers (Fig II & VI)

Fig I shows the rechecking work of literature structure might be made once within (minimum) year length of life—years down to the inflection point from the said present Although incessant searching for new bibliovessels cited in the literatures—primary or higher ordered-currently and successively issuing—is quite indispensable

8 Summary

Regarding an aspect regarding quantification method for selection of bibliovessels, new combination of quantification views with data obtained has been described above although this is an aspect among many already known.

Starting from territorialization of literature, number of citation counts survey is done within the territory so that from this data "life curve of literature in the territory—"Number of Citation Counts vers Year"—Fig I—is prepared, from which "Locus of Inflection Point" in the life curve, in other words, "Year length of life vers year (A D)" curve, is derived which clarified detrimental tendencies in life length in view of active use of literature

Same phenomena in every nation also could be seen in comparison with the same in Japan as in Fig VI So that the aspect here introduced brought about a considerably quantified active method for selection of literatures via bibliovessels, although this is done basing upon progress report on this subject which the research on this is still undergoing at present

In the joyful memory of 70 years birthday's commemoration of Dr Ranganathan, I have written this with all my heartiest esteem for his brilliant and contributed works in the field of library science and documentation I thank you

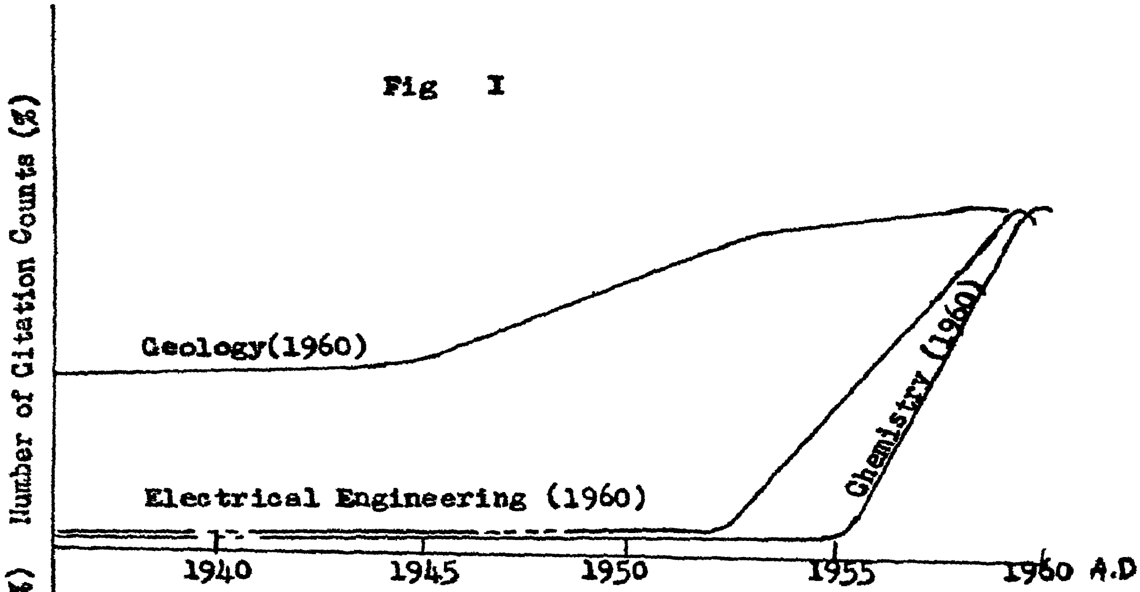

Fig I

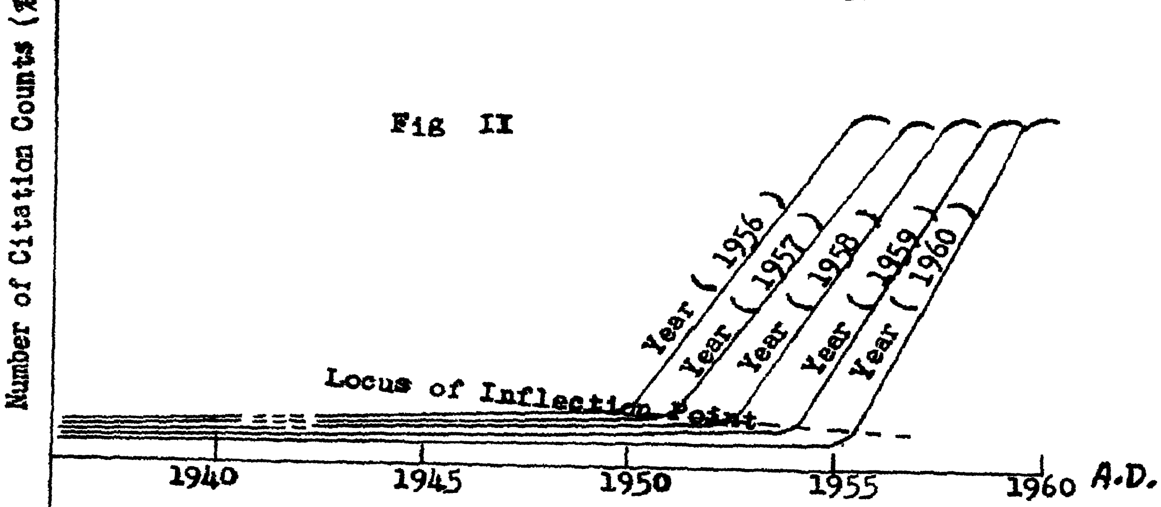

Fig II

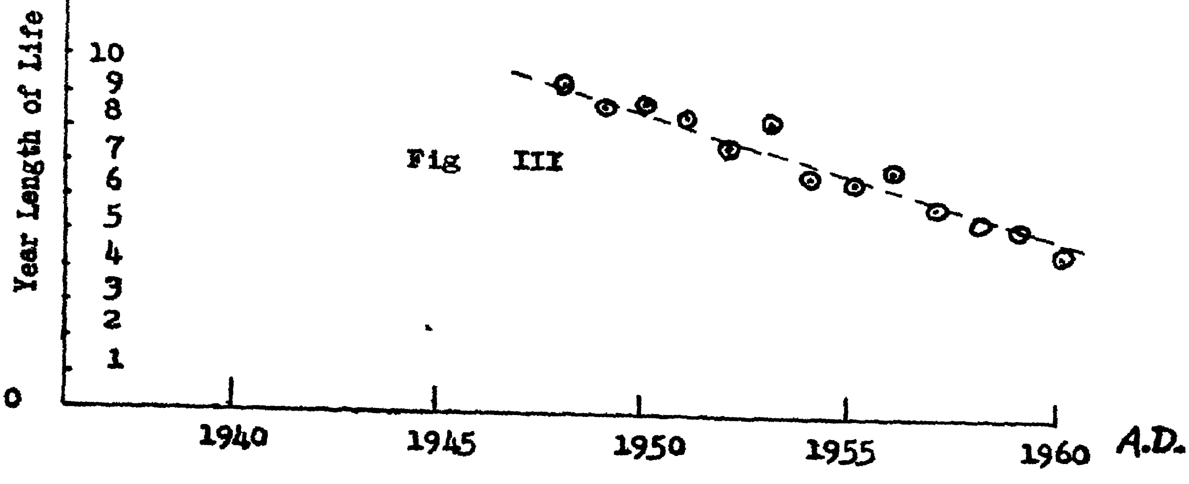

Fig III

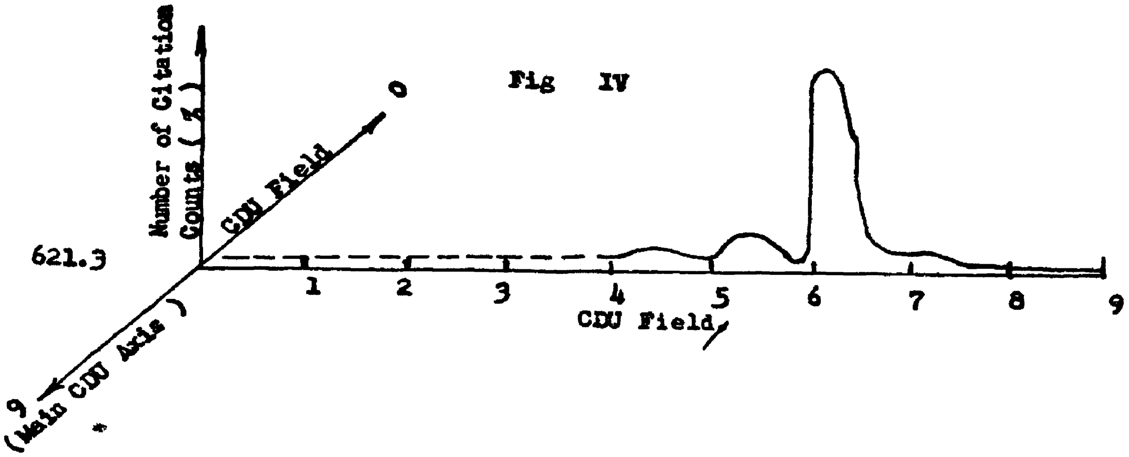

Fig IV

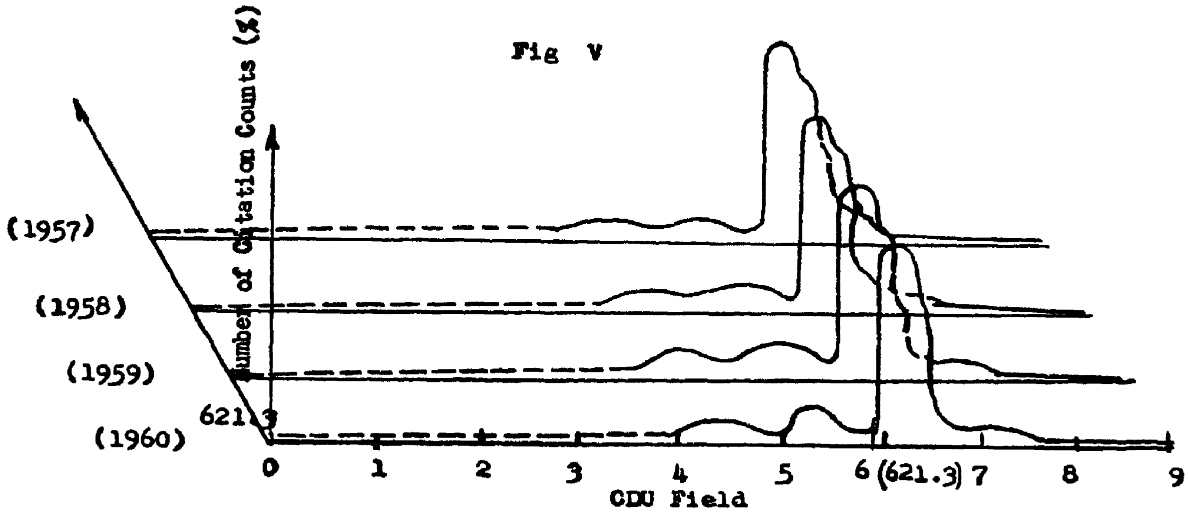

Fig V

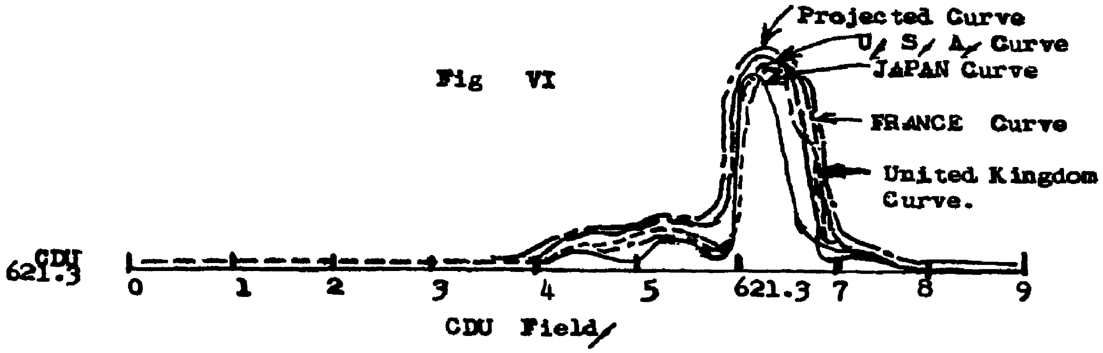

Fig VI

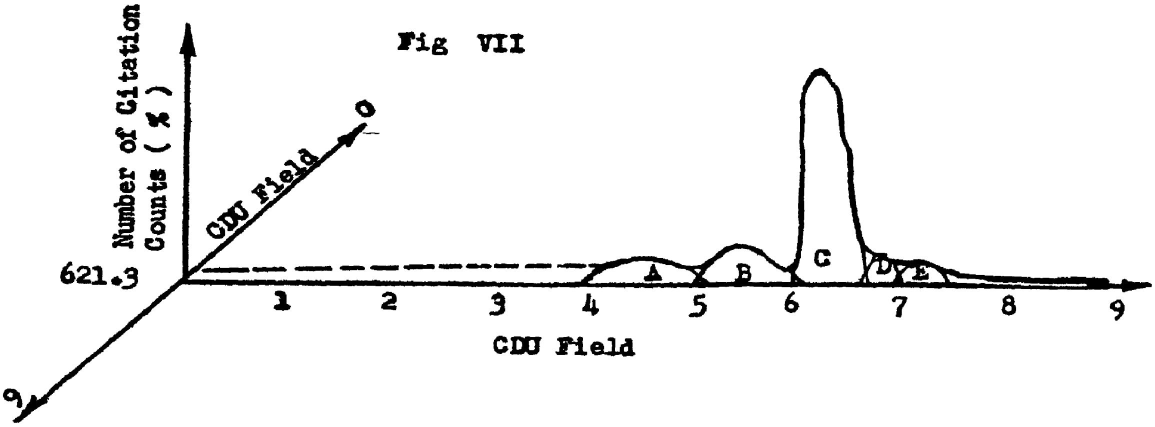

Fig VII

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CHAPTER H6

Professional Training in Documentation

J Saha

1 Genesis

Otlet who was a lawyer used the word 'documentation' in 1907 when he needed a term covering the activities both in libraries and in archives. He called the "International Congress of 1910 held in Brussels," Congress de bibliographie et de documentation, thus combining two words which had different meanings and were mutually exclusive.

11 Documentation

To Otlet documentation was equivalent to bibliographic control of the complete literary output of the different countries. Documentation in this sense was the task of the national libraries. The national libraries did not respond to Otlet's enthusiastic ideas and did not accept the new term. The beginning of the Twentieth Century saw the growth of special and industrial libraries to facilitate the co-ordination and systematic use of recorded knowledge and information in all public affairs and in industry and commerce and in all the arts and sciences. In USA, the Special Libraries Association (SLA) was established in 1908. Sixteen years later the Association of Special Libraries and Information Bureaux (ASLIB) was founded in England in 1924 with the same purpose in view. Both the organisations (SLA and ASLIB) avoided the use of the word 'documentation'. The word was first used in its modern sense in 1920 by NIDER (Netherlands Instituut voor Documentatie en Registratuur). The Dutch definition of the word was: 'Documenter cest reunir, classer et distribuer des donnees de tout genre dans tous les domaines de l'activite humaine'. Between 1907 and 1931 the word was used with a variety of shades of meaning and commonly indicated in a stricter sense the methods and means for rendering the scientific contents of a document accessible to the user.

However the word became quite significant and more extended when the Institut International de Bibliographie founded in 1895 changed its name to Institut International de Documentation in 1931. Subsequently the Institut acquired a federative character consisting of national and international members and changed its name to International Federation for Documentation (FID) in 1938 The American Documentation Institute in USA came into existence in 1937 and the Centre National de la Recherche Scientifique (CNRS) Centre de Documentation in France in 1939 for organization and dissemination of specialized knowledge In 1937 Jean Gerard gave the broadest definition of the word 'documentation' which FID very clearly explained as the creation, transmission, collection, classification and the use of documents, documents broadly defined as recorded knowledge in any format The whole gamut of operations from the creation of new knowledge to its arrival at the user is covered in documentation through the processes of report writing, publication, abstracting, classification, indexing, reassembly, presentation and dissemination

2 Documentalist

The creation of the documentalists has been enforced and encouraged by the exigencies of intensive scientific research during the Second World War and an expansion of scientific library and documentation service to integrate scientific and technical information and bibliographic work with the different stages of activity in scientific research and experimental design has been accepted as an essential corollary to the developments in science, technology and industry in the last two decades As the fields of investigation become more and more complex, the need for information from related but different disciplines become greater The need for cross-fertilization between different fields is greater in this age of sputniks and explorers than it ever was and the problems are also greater

The attention of the 'scientific world' was drawn to the profession by sponsoring several successful conferences on scientific information during the last 12 years where scientists, documentalists and librarians from all over the world met to discuss the problems and techniques of documentation—the first being organized by the Royal Society in 1948 As a result of it, national and international bodies encouraged the establishment of the national documentation centres in many developed as well as in lesser developed countries

21 BEGINNING OF RESEARCH

People began to give systematic thought to this new discipline and emphasised the need of research in documentation Now this increased demand for deeper analysis in indexing, and the capabilities of the machines for handling quickly a large number of data have engaged the thoughts of the librarians and documentalists to the advantages of pin-pointing specific information in a particular document A large-scale research is going on about the design and capabilities of indexes, faceted classification, indexing by chain procedure, and correlative indexes besides several new ideas and experimentation on alphabetical indexes

On machine searching experiments for the rapid handling of the physical masses of data much attention and thought have been devoted particularly in USA and USSR to the development of automatic retrieval of technical information using filmstrip, minicard, punch-card, punch tape, magnetic tape, high-speed digital computer and such other machine methods Several new periodicals mainly devoted to the documentation problems and techniques appeared in quick succession for communication of these research results

3 Periodicals

The ASLIB published the *Journal of documentation* in 1945 besides the ASLIB's *Proceedings* containing papers and reports of discussions at ASLIB meetings and conferences

FID published the quarterly *Review of documentation* (1934) and monthly *Informations*

The American Documentation Institute published the periodical *American documentation* in 1950 which historically is the continuation of the *Journal of documentary reproduction* founded in 1937 Five volumes of this periodical appeared during 1938-1943 after which the pressure of wartime forced its suspension

The UFOD published the *Documentation en France* in January 1952, and also shared in the publication of a well presented periodical entitled ABCD, a joint organ of four associations archivists, bibliothecaires (librarians), conservateurs (keepers of the public collections) and documentalists

The *Annals* part of the *Abgila* was devoted to topics germane to documentation It began publication in 1949 But the Indian Library Association discontinued it after v 3 (1953) Its purpose was continued, however, by the *Annals of library science* founded in 1954 by Dr S R Ranganathan In 1955, the publication of this quarterly was taken over by the Indian National Scientific Documentation Centres (INSDOC) It contains original contributions in the fields of Library Science and documentation methods and techniques

Besides this a large number of articles covering documentation problems and methods appeared in different library periodicals

4 Training in Documentation—A Retrospect

Though some hopeful trends were already apparent and several active groups began working to develop a sound programme to discover what the various users of documentation need the entire field of documentation remained in a somewhat chaotic or disorganized state due to lack of systematic training facilities for this new cadre The failure to recognize the extent to which formal training in documentation and allied disciplines is available arises, partly from the failure of the profession to define what documentation is and what kind of training the documentalist needs. The recruitment for documentation work remained to be drawn from subject specialists or personnel trained in Library Science

41 USSR

In a resolution of the Central Committee of the CPSU 'On the conditions and measures for improving library work in the country' attention has been paid to the fact that the selection and training of bibliographical cadres is inadequate, specially in regard to scientific-technical and special libraries It has been advocated that it would be useful to form special groups at higher technical educational establishments to train information engineers and also stressed the need to improve the course for training cadres of bibliographers specially for scientific and technical libraries Due attention has been now given to organize at the large libraries of the Soviet Union higher courses for bibliographers or the faculties at bibliographical institutes where specialists in different branches of knowledge, invited to work in scientific and technical libraries, would receive the necessary training in scientific information and bibliography

42 USA

In the first issue of the *American documentation* in 1950, Jesse H Shera and Morgaret E Egan described the situation in USA

> "There is in this country no provision for the specific training of documentalists Those who are now active in the various fields related to documentation have received their training in one of the three ways (1) training for librarianship, (2) training for archivists, (3) advanced training in a subject field
>
> Many of the activities coming under the term "documentation" are carried on by the staff of the indexing and abstracting services and by special librarians For both groups, training in the specific field is considered essential but usually insufficient
>
> In spite of the excellent training offered by many universities in the substantive matter of the subject fields, the bibliographic aspects are too frequently neglected and there has been considerable pressure on the library schools to include special training for documentalists in their programme"

However during the last ten years a new word 'literature scientist' has evolved in the USA to designate those scientists who perform certain of the tasks traditionally looked upon as a part of librarianship, plus additional bibliographic, editorial and journalistic duties. Several articles purporting to describe the duties and functions of a literature scientist have been published in the last ten years A number of universities are now cognizant of the need for trained literature scientists in industry and other organizations and these universities now offer a variety of courses designed to further the training of literature scientists Even though there are many courses, these are reminiscent of a child's first steps towards a definite goal

43 INDIA

In India with the rapid drive for industrialization and greater economic productivity and the corresponding increase in the intellectual output and scientific manpower, there is pressing need for satisfactory information services and for better methods of recording, analysing, retrieving and disseminating information, specially in the scientific and technical fields But the dearth of trained personnel for documentation work and lack of adequate training in documentation methods has been a great handicap for a successful discharge of duties In India 14 universities are providing training in Library Science. Except in Delhi and Madras all the other universities offer a one year training course leading to Diploma or Bachelor's degree in Library Science The universities in Delhi and Madras have provision for two years' training course leading to Master's degree In this course a few aspects and methods of documentation are covered but the course is only one of its many optional subjects

5 Current Trend

The Brussels session of the International Congress of Libraries and Documentation Centres in 1955 considered that the orthodox training in library schools and the existing rigid methods of library management cannot cope with modern standards of development in scientific research They are incapable of developing and perfecting the necessary forms and methods of scientific and technical information and bibliography The assembly stressed the necessity of a separate professional training and resolved as follows

1 that the duties of persons engaged in documentation work are often different from those of the librarians and that in consequence, the syllabuses of professional library schools are not suited to their special needs,
2 that it is desirable for courses to be organized in countries where they do not already exist so as to enable these persons to acquire, or to perfect such special knowledge as they may need for the execution of their duties in documentation

The Conference also recommended that it would be desirable to secure, as a matter of urgency, the establishment of the status of the documentalists and to define clearly his position in the life of the community, and to secure for his profession the same recognition as is given to other professions

Higher standards of documentation service essentially involve the provision of a better trained staff. All over the world it is being realized that professional training is now necessary, and various bodies are studying the requirements.

It is important that high standards should be set, and the courses should be carefully planned

51 FRANCE

In France the Central National de la Recherche Scientifique, the Centre de Documentation continually developed its importance since 1940 All those who in France are concerned with documentation, official and non-official, grouped themselves in a Union Francaise des Organismes de Documentation (UFOD) for discussing documentation problems and techniques This UFOD considered the training of documentation technicians as an essential feature and established the Institut National des Techniques de la Documentation for this purpose in 1945. The Institut is running a two years' study programme and awarding Diploma de Documentaliste on the successful completion of the course Possibly this is the first full-time training course in documentation and France may claim to be pioneer in this matter

52 USA

In USA, the first course in documentation was offered at the School of Library Science at Western Reserve University during the academic year 1950-51 At the present time courses relating to documentation are currently being offered at Columbia, Michigan, Rutgers and Western Reserve Universities The first Centre for Documentation and Communication research was established in USA in 1955 at Western Reserve University, Cleveland, Ohio, USA as the research wing of the School of Library Science The centre is now carrying out a four-pronged programme of education, research, liaison and operational services in order to achieve its objectives Machine literature searching and language engineering are two formal courses offerred at the centre

The centre is at present experimenting with various technical methods for mechanization and automation of information processing Investigations are proceeding on three main lines the elaboration of ways of mechanizing certain stages of the technological processing, such as the compilation of author and subject indexes, the devising of machines for scientific reference service, and the elaboration of means of mechanizing and automating the publication of information.

53 ENGLAND

In England, the ASLIB has given due attention and thought for training of special librarians, documentalists and information officers and organizing short term specialized courses to meet the required demand of the cadre in the country

In 1958, the Institute of Information Scientists has been established to promote and maintain high standards in scientific and technical information work and to act as a professional qualifying body for those engaged in the profession. A two years' part-time course is now held at the Northampton College of Advanced Technology, London

54 NETHERLANDS

In Holland the NIDER (Nederlands Instituut Voor Documentatie en Registratuur) initiated by F Donker Duyvis was founded in 1921 to keep the Dutch industry and scientific workers informed of the technical literature. NIDER in conjunction with the Netherlands Union of Librarians is running training courses on Industrial Libraries, Research Information Officers, Classification etc

55 INDIA

It is not peculiar but nonetheless unfortunate that in India also very few persons have given due attention to the documentation problems and continuing research on documentation techniques However the demand for the documentalists and subject bibliographers has been on the increase and the problem of trained documentalists is so pressing that it cannot wait till the universities re-organize the existing training in Library Science to cover the training of subject bibliographers and documentalists

551 INSDOC

The Indian National Scientific Documentation Centre (INSDOC) was established in 1952 Its scientific development and appreciation of the service rendered during the last ten years envisaged INSDOC as one of the appropriate training centres for documentalists But INSDOC could not develop all facilities to organize a full-fledged course for training documentalists In 1956, the INSDOC organized a six weeks' course in documentation when seven librarians of South Asia (Ceylon, Burma, Thailand, India) sponsored by UNESCO attended the course In 1957 and 1958 INSDOC organized four weeks' practical training for the librarians of the National Laboratories At present INSDOC is providing facilities from time to time only for short-term practical training to persons working in other libraries It is unfortunate that INSDOC could not programme teaching of theory for adequate practical work for lack of bold policy decision at higher level

552 IASLIC

The IASLIC (Indian Association of Special Libraries and Information Centres) established in 1955 on the model of ASLIB in the United Kingdom also gave considerable thought to the training of the special librarians and the documentalists. The committee appointed in 1958 for the training programme submitted a scheme and also drafted the syllabus for the training course The curriculum for the advanced course of training in special librarianship covered. 1 Organization of Special Libraries and the Management of Library operation, 2 Bibliographic control of materials, and 3 Documentation In absence of encouragement and financial support, the training scheme could not be successfully worked out

6 Mahalanobis-Ranganathan Contact

The idea of a research centre on documentation in India came up in 1956 when Prof Mahalanobis, the well-known scientist and founder of the Indian Statistical Institute, met Dr Ranganathan and said that India herself was going forward sufficiently with her industrialization and that it had begun to realise the need for advanced documentation work At that time, Ranganathan had settled in Europe in order to find adequate opportunities in industrialized countries to stimulate him to further research in documentation technique Prof Mahalanobis invited Dr Ranganathan to come back to India and join the Statistical Institute to develop an efficient coding system for documents and information relating to planning. Further Prof Mahalanobis offered to start a Department of Library Science with Dr Ranganathan as its first Honorary Professor and provide the necessary staff and research fellowships or stipends for advanced students for continuing research on documentation techniques Unfortunately Dr Ranganathan could not make himself available to accept the position However, Ranganathan felt that it was too premature for the Indian industries and research organizations to realise the value of documentation At the same time, since he was convinced of its gaining importance in due course, he endowed the Sarada Ranganathan Chair in the University of Madras for advanced teaching and research in library science in general and in documentation in particular

7 Ranganathan's Effort

Dr Ranganathan returned to India in 1957 and after some time he formed a small research circle at Bangalore and continued his researches on analytico-synthetic classification with his two or three junior associates and accepted 2 or 3 documentalists from different organizations for training in depth classification

In a paper published in the *Annals of library science* in 1959, Dr S R Ranganathan outlined a syllabus and the course of training of documentalists In the detailed scheme, Dr Ranganathan mentioned that it would be useful to form special groups at higher technical educational establishments to train documentalists As the training will be at a sufficiently advanced level it has been laid down that a candidate for admission to the course should have a good M A or M Sc or Honours degree preferably having familiarity with bibliographic work and service The duration of the training is taken as one year and the course of studies has been designed to provide training the thematic working plan of the documentation service in scientific research institutes, search, selection and evaluation of printed works and other technical information material and systematization of literature with the aid of depth classification and methods of literature search This syllabus received wide attention and appreciation of many but unfortunately none of the universities came forward with proposals to implement it quickly to train up documentalists

71 SAHA-RANGANATHAN CONTACT

In March 1961, when the present author met Dr Ranganathan at Delhi, he suggested developing this study circle into a documentation research and training centre for training documentalists for India. Dr Ranganathan had in vision the idea of such a centre and this author simply fired his imagination by offering to explore possibilities of organizing such a centre at Bangalore under the auspices of the Indian Statistical Institute Dr Ranganathan offered to head the centre as Honorary Professor On the basis of these discussions a scheme of this documentation research and training centre was submitted to Prof Mahalanobis, the Director of the Indian Statistical Institute which he accepted on the background of his earlier thought

8 DRTC

Accordingly, in September 1961, the Indian Statistical Institute decided to establish a Documentation Research and Training Centre in Bangalore It is a residential institute with Ranganathan as Honorary Professor and Head and two Readers It will train each year 10 or 12 persons Admission is open to students of all countries and particularly to those of Asian and African countries It generally admits only persons with a good postgraduate degree in one or other of the sciences The Centre also conducts periodical seminars on different aspects of documentation open to persons both from India and abroad

A big bungalow with a large compound has been hired at Bangalore for the Centre Besides the accommodation for class rooms etc for teaching and residential accommodation for the teaching staff, arrangement is in progress to provide residential accommodation for the students within the campus

Provision has also been made to invite senior documentalists both Indian and foreign as guest teachers to deliver lectures on the subjects of their speciality and to participate in the research programme.

The first batch of trainees commenced their apprenticeship in April and their formal training in June 1962

81 CO-OPERATION WITH OTHER BODIES

The Documentation Research and Training Centre will work in close collaboration with the INSDOC, the Indian Standards Institution, the factories, the commercial houses, the national laboratories, defence laboratories, and universities Apart from doing fundamental research in documentation, it will also design schedules for documentation work in particular enterprises It will welcome the documentalists in different establishments to come and reside in the Centre and improve their own design for documentation work in collaboration with the research staff of the Centre

82 DEVELOPMENT INTO INTERNATIONAL CENTRE

There is little doubt that Dr Ranganathan's international recognition as leader in depth classification will attract many documentation experts and trainees from abroad who will help in international exchange of ideas at higher level, and develop this centre into an international centre for research and training in documentation techniques

PART J

LAWS OF LIBRARY SCIENCE

CHAPTER J1

Ranganathan : My Benefactor

A Book's Appreciation of Dr Ranganathan

M RAJBEE

0 Origin of Alphabet

MY origin is lost in the mists of human civilization when the ice was melting in the inconceivably remote past well stretched back into the paradisaic intervals of human history. "In the dim prehistoric past men had recourse to drawing pictures in order to express themselves. This was a development of immeasurable importance in the evolution of man, it was his first effort to make thought or feeling visible in a lasting form".[1] The art of picturization as the media of expression was unconsciously and unknowingly a mighty power man was unleashing in the world. This was the first step towards my origin. Millenniums passed in my evolution. Many objects of Neolithic period and Bronze Age are found with pictographs of utensils of bones and metals.

01 FIRST WRITTEN RECORD

Many of my ancestors have been destroyed without any trace as a result of Man's utter ignorance and negligence. According to man, my first available specimens "That have yet been discovered have been found on two well-prepared pieces of black stone, about four inches squares one (the Hoffman tablet) in the possession of the General Theological Seminary in N Y City and the other in the museum of the University of Pennsylvania in Philadelphia. Both come from Mesopotamia and show a very primitive form of the pre-cuneiform characters of that region. This age is only guessed-possibly 6000 B.C." [Ibid] This momentous step in human progress is hidden in the dimmest reaches of pre-historic times, as Mason called it "the most signal intellectual achievement ever attained by man required several thousand years." With the growth of time, I also grew from stone, bone, rock and metal to perishable materials such as hides, wood and bark. At the dawn of history I was unquestionably on a variety of accessible materials. As I am the product of man's mental faculties, I have been regarded much by man at all times and in all circumstances. I am one and the only one who has played a most vital and significant role in shaping the Man, His history and His civilization Man's evolution from Ape to the most civilized modern had been due to me only But he is a strange animal At times he hugged me in ecstasy and at other times burnt me in wrath.

02 Origin of Libraries

I am much indebted to the kindness and hospitality of Egyptians, Mesopotamians, Assyrians, Babylonians and the Chinese who respected me most It is they who for the first time began to keep me I was in clay tablets when the Assyrian king Assurbanipal at Nineveh recognised me in his great court [3] But till then I was a treasure and playful thing for kings and nobles

03 Origin of Paper

With the turning wheel of time I was also changing my shape and form from hard to soft materials. Though my soul is immortal yet I was given the body of perishable materials, like bark, skin and then one fine morning I was ultimately clothed in a new apron in which at present you see me [4] This new dress of mine was a boon to me This beauty aid enhanced my beauty of form and stature enormously.

1 The Book

I am the daughter of man's great mind, who in the ancient days betrothed me to kings and nobles They loved me and cared me so much that they provided separate apartments for me in their palaces But even then I was feeling loneliness and was not much pleased with their behavior Ever since my birth man has regarded me feminine They put me in closed and secluded rooms like their sweethearts and queens in the 'Harem' They loved me so much beyond doubt, but their esteemed love and over affection and care was no short of curse to me For many ages I was put in chains [Ibid 3] but this imprisonment of mine was precautionary against my elopement I felt uneasy on my master's over precaution I was never treacherous to my master though I am well aware of my beauty which maddens the man Unlike women I have never been mysterious or treacherous I am open to all and true by every word from heart to my lips Man in order to demonstrate his masculine superiority has always taken bold steps to have and keep any feminine beauty and has achieved his object by fair or foul means As such I have been kidnapped (stolen) many a time. I was never happy with this treatment by him (Man) in spite of realising full well that it was out of immense love for me Gradually he grew soft and kind to me and the cruelty began to disappear He transferred me from a secluded room to a separate house built for me There was always an attendant named Curator for me But here also I was simply sequestered and was kept aloof from him except with the occasional company of a few

2 Invention of Printing

My body changed fast from clay to paper but my speed was tortoisely slow till the benevolence of John Guttenburg of Mainz Guttenburg was a friend indeed who gave wings to me I developed speed and became prolific in production due to the magnanimity of John Guttenburg I was entirely different in shape and form from my elder sisters called Manuscripts and Incunabulas I was on fine paper and in fine printing in comparison to my less fortunate predecessors on coarser materials and in un-even hands I began to grow fast and enormous Now I was the beloved of kings and the pauper alike I changed my dwelling from the tomb of a museum to a busy market place

3 Public Libraries Act

Men in all lands have taken great pains for my upliftment and after long and protracted struggle of the revered few they got me recognised through legislation I was allowed by law to step into the public life

4 Ranganathan and his Techniques

But my benefactor was yet to be born and at long last my Jesus took birth in the Orient, that Orient where all prophets are born He brought with him the news of my emancipation He brought the message of peace with him

5 Five-Laws

51 First Law

Ranganathan's first Sermon on the Mount was his *Five Laws* and in a clarion call undaunted by fear of old and rugged beliefs, he declared that "I am for use" (Books are for use) He said that I am not one to be treasured, kept uselessly, secluded in chains, locks and imprisonment, to be worshipped or to 'Darshan' from far He argued and asserted that I am for use I am one to be hugged, embraced, kissed, and caressed I am a joy for all minds and a mental nourishment I am honeyed nectar to be sucked in constant kisses. 'Thy will find if Thou wilt seek in me ' I never take from any but always give to all and many. I am a river of no return. One who has once tasted the nectar in me has forgotten his all and of himself. He leaves all altogether even his sweetheart of flesh and blood and is lost in me He runs passionately after me. I am a strange product of man. God created man and man created me I am the most vulnerable artifact of man He belied all old beliefs of me as an inanimate object, a mere block of printed paper safely tied within stiff covers He found me alive and animate by the personality of my creator (author) In me he attains, as it were, terrestrial immortality I am light which brightens every mind filled with darkness. I am the man's greatest teacher I am a staff for the blind to be leaned upon and strength for the weak to be relied upon I am a shoe which carpets his pathway across even the roughest country I am a ship which overcomes the fury of the ocean and lands with safety I am the best companion of man I am a uniting cord among all men who come across with me for once even, irrespective of duration or situation I honour my words and speak the same to all without reservation

52 Second Law

Then secondly Ranganathan declared that "I am for one and all" (Every reader his book or Books for all) [Ibid 7] When I am born I must be betrothed to some one I must be given in some one's hands I should not be left sitting idle at home I must go in company of some and set right his affairs I must enlighten his soul I must be encouraged with an opportunity to cultivate the wild mental field I may help my friend in the way of right thinking He categorically belied those who had alleged me previously as obscene, pervert, immoral and harmful and had declared me to be kept restricted, chained and segregated like untouchables My emancipator said that all such qualities differ from individual to individual Therefore in my 'Soember' there is some one in some far off corner of this multitude who is definitely befitting to me, as such, I must be betrothed to him and I must be married to him I have great qualities of adjustability and adaptability I am a friend from a child of three to any age My bonds of friendship grow stronger the older the man grows

53 Third Law

Thirdly Ranganathan said that 'Some one is for me' (Every book its reader) [Ibid 7] If all men are not suitable for my matrimony, at least in this community there is some one who is matching me If I am uncommon by nature and taste, size and shape, spirit and soul, beauty and age, if I am so novel and extraordinary in my qualities and stars, at least there is some one whose stars come to similarity and familiarity for communion in his 'Horoscope' Then I must be given to him who is fit to husband me When I am of age and there is some one who needs me also, why should I be subjected to remain in celebacy He is longing for me and when I am his sweetheart, why should I be separated from meeting him My lover is sure that I am the cure of all of ills. He yearns for my company. He knows with confidence that I will bring his prosperity and success to him I am a fortune to him

54 FOURTH LAW

Fourthly Ranganathan said, "Save the time of my seeker" (Save the time of the reader) [Ibid 7] It was a word of caution to all the meddlers 'Do not come in the way of my fiance' Ranganathan knew that I am a tongueless creature who cannot call to draw attention of her lover He also knew that I am devoid of feet to meet my lover half way He also knew that I have no arms to stretch and embrace my lover in extreme feeling of joy and he pitied me He knew me to be a mine of knowledge which is buried under the cruel hands of time and chance He instructed all to dig me up to the horizon without loss of time My lovers should not be disgusted in locating me

55 FIFTH LAW

And at long last, as the last of his 'Five commandments', Ranganathan said, "My home is a growing organism" [Ibid 7] The abode where I with all my paraphernalia live, is a growing organism He knew that the paper bound inanimate body comprised of loose leaf soul tied with a spine is terrifically prolific by nature He knew that the multitudinous growth of me in the rocket and missile age is beyond one man's power to arrest I am a perennial river of knowledge which goes on flowing through the unfertile and steep tracts of human mind, bringing light to the man's dark mental compartments, and if not properly cared for will overflow I am a rising sun whose light goes on spreading to all nooks and corners Growth which is inherent in me will outgrow the dwelling where I happen to live My versatility has led people to believe an institution in myself and that is why they like me so much

Bahut lagta hai dil suhbat men uski
Woh apni zaat se ek anjuman hai [Hali]

[One likes to sit in her company
She is an institution by herself]

56 THE BEST COMPANION

Unlike human being, I am eternal Time has not defaced me, rather I am growing strong and beautiful with every speck of oozing sand Death and mortality are unknown words in my dictionary and every member of my great clan is alive and living as vigorous as on the first day of its birth The man of sand and foam is bewildered to keep me in peace and tranquillity year after year The problem of my accommodation is a constant headache to man and all his planning and housing techniques get helpless before my slow but steady pace

6 Scientific method of Keeping and Use

But at long last came the prophet That frail man from Shiyali in South India has come to rescue the poor and succour the weak God gave His Ten Commandments and this our half God gave His Five Commandments or Five Laws Like God he also gave his scriptures of *Colon Classification*[8] *and Classified Catalogue Code* [9] Besides these scriptures, he gave us all which is needed for better living in a host of many monumental works—creations Ranganathan, my master, my benefactor, the most compassionate has given us the code of life and living He has brought me from oblivion to sublimity He picked me from the abyss of man's ignorance to the horizon of perception and perfection I was lying buried like pearls in the unfathomable depths of man's ocean of ignorance He brought me from darkness into light

7 Colon Classification and the Universe of Knowledge

It is Ranganathan, 'who gave me a house of a pivotal status in the making and uplifting of human society He freed us from chains and slavery for all times to come He made us accessible to the common man His Colon Classification has set right my home where one can easily recognise any of my family members from the multitude and also established the order of hierarchy He recognised my parents with z Generalia 4 Journalism [Ibid 8] and among all my sisters he cultivated the sense of sisterhood and at the same time with the degree of elder and younger We have 37 sisters (from A to Z) [Ibid 8] in all who are prosperous and have their own family countless and innumerable, abounding the whole universe of knowledge and spread all the world over I exist where man exists and I die for human breath and human touch As fish lives in water, so I live in human crowd His constant and hot breath and recurring touch is my source of nutrition, and under such conditions of care and attention, I have survived and will survive for ever I speak all languages and live in all climates I am coexistent with all men

71 HOSPITALITY

Ranganathan constructed some vacant rooms in my great house to accommodate some guest sisters at times of their short stay or courtesy calls As such I am hospitable too

8 Library Service

My God rejected with one stroke of His pen all the false belief of the old that some of my family members are immoral, obscene and ephemeral belle etc He argued that all the members of my family are unforgettable at times. He said that I am harmless by nature and so nothing to fear of me It is simply a matter of judgement and calculation to betroth me at the right moment, to the right person in a right way Men may come and men may go but I will remain the same as ever and can never be dwarfed, belittled or ignored by any man's hand That is what Ranganathan has bestowed upon me

81 DOCUMENTATION

Credit to Ranganathan who devised the scientific methodology for my keeping and upbringing from mere clay tablets and palm leaves to my microfilmed personality By the grace of Him I am immortal from Macro to Micro abstracted and documented personality which remains intact

3 Books' Felicitations and Acknowledgement

In the last I pay my profoundest gratitude to Ranganathan on his 71st birth anniversary and pray for his longevity and zenithal reputation and with all humility due, I hereby carry his message and mission I am at his service just to pay an instalment of my debt towards his immeasurable and countless good done to us which can never be cleared by any amount of service and should not be measured in the denomination of a few coins priced as my price

The more I move from hand to hand, the more I feel proud of my service.

Long Live Ranganathan

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CHAPTER J2

Scientific Method

J C BINWAL

0 Introduction

SCIENTIFIC method as a subject of study in library science was unheard of in the past. Even as late as 1957, librarians were unaware of the potentialities of 'scientific method'. Dr Ranganathan had included the study of this subject in the Degree Course of Library Science in the Delhi University in 1948. But it appeared in print for the first time in 1957.[1] I noticed it as a student of library Science in 1959. But I was not able to grasp its exposition and utility at that time. A year later I found myself confronted with this subject in the M Lib Sc Course where it continued to figure prominently in the paper 'Universe of Knowledge'. Dr Ranganathan's paper 'Library science and scientific method'[2] and its exposition in other works[3] gave me a better understanding of the term and all its implication. The subject is such that it cannot be adequately interpreted without basing it on Dr Ranganathan's exposition as given in several of his writings. I have attempted to analyse the subject and its implications since it appears to be an essential instrument for the study of library science, universe of knowledge and any further research.

1 Definition of Science

Organized knowledge is a composite of all kinds of knowledge, not only scientific and historical, but also common and empirical and even ethical and aesthetic knowledge. Through accretion of data, through synthesis of inherent components and through the interrelation of subjects, there develops a system or organization of knowledge disclosing the unity of knowledge; where there are such interrelations, there can be no complete separation. Science, then, is to be distinguished from other kinds of knowledge, empirical, derivative and rational. The intrinsic nature of scientific knowledge is understanding and comprehension.

Understanding follows belief. Belief is a psychological state of acceptance of a proposition and as such a subjective phenomenon. But the essential nature of science is to find an objective ground for belief. The objective ground for belief is found by drawing as many implications as possible from the proposition behind it or seeing that all of them come out to be true. The proposition, until verified, remains a candidate for our belief Such a proposition is called a 'hypothesis' A verified hypothesis becomes a theory or principle or law A hypothesis is said to be verified when it explains and is consistent with facts Science is not confined to a single theory It is a system of theories or concepts Science is ideally a pyramid-like system, based on observed phenomena or facts, and the higher and higher levels of the pyramid correspond to more and more general theories, from which less general theories are logically deducible

"Science is the name given to a domain in the universe of knowledge whose development is characterised by a method called scientific method "[4] In other words science is ultimately bound up with the way it is built up The system of theories in modern science has been built up by patient and objective observation, by formation of hypothesis to explain these facts and by the process of painstaking and scrupulous verification of the hypothesis The three processes namely, observation or accumulation of facts, the formulation of hypothesis, and the verification of hypothesis form the methods of science

11 Observation

Observation may be defined as the scientific procedure of comprehending things, events, quantities, qualities and relationships The purpose of observation is to obtain more and more facts

We can distinguish three modes of observation in science (i) Visual, (ii) Aid of suitable research instruments, and (iii) Experiment

(i) *Visual Observation*

Visual observation stands for receiving a datum or data of sense experiences Sense experience is subjective But science results in unrelinquishable search for objectivity Science reaches this objectivity in three ways

1 The observation of different persons similarly situated must lead to the same result, 2 It must be repeatable by the same person as well as other persons, and 3 The quality observed of a quantifiable datum by one observer should agree with that observed by another observer

(ii) *Aid of Suitable Research Instruments*

This mode of observation entails assisting the senses with suitable aids Telescope, microscope, and photographic plate bear testimony to the fact that they have been of tremendous help in recording facts which would be otherwise unobservable

(iii) *Experiment*

In nature the conditions under which we have to observe a phenomenon may occur in its own time But in an experiment we can arrange the conditions under which an observation is to be made

Thus the experimental method makes possible a more reliable analysis, in that the observer may repeat the experiment over and over again at will and thus greatly lessen the probable error of his determinants Similary the investigation may be more or less easily divided into parts, thus facilitating research and making possible more accurate inference as to the connection between various phases of the experiment

12 FORMATION OF HYPOTHESIS

Now we step into the next process in the building of science ie formation of a hypothesis Active interrogation to discover the cause of a given event in nature often makes resort to a preliminary supposition or hypothesis, which is proposed as an unverified conjecture in an effort to explain the basis of the unknown phenomenon, subject to ensuing proof

The second question to be explored is how a hypothesis is formed A hypothesis is a generalisation in form of a proposition and formed by the process of induction Inductive inference is concerned with the derivation of general propositions from the evidence of specific cases which come under the induced generalisation

The theory of induction suffers from two defects

1 A single instance can destroy the generalisation For example a single black swan may nullify the generalisation that all swans are white Thus an inductive proposition says no more than that in the cases observed so far all swans have been white Thus it defeats the purpose of generalisation which is to predict new facts

2 Induction is based solely on observation But in a highly developed science the cause may not at all be an observed phenomenon, it may entirely be a creation of the mind For example the heredity theory of Mendel by means of genes, where the genes were never observed by him and none has been able to isolate a gene till now Yet no one can deny the helpfulness of the theory

Thus an hypothesis may be a free creation of scientific imagination, a leap of imagination But it is seldom a leap into the dark There is always some clue to the direction of the leap The clue is the result of the previous processes of analysis and synthesis It is only when data and experiences are classified properly that a hit on a feasible hypothesis is facilitated To illustrate, Biology is based on classification It was Linnacus who by classifying the vast number of animals and plants known in his time laid the foundation of scientific biology

The next question is to examine the qualities of a hypothesis A plausible hypothesis must have the following qualities

1 It must explain or describe the known facts

2 It should be fruitful i e the consequences derived from the hypothesis must also conform to new facts brought to light from time to time
3 A good hypothesis should contain the least number of undefined terms or unproved assumptions Simplicity of a theory is often a measure of its potency

13 TESTING OF HYPOTHESIS

Testing of a hypothesis is the third process in the building of science
A hypothesis is tested and accepted in two ways

1 It must include the other accepted theories and concepts in the field
2 Consequences derived from it must tally with experience or observation.

Consequences from the hypothesis are derived by means of deductive logic The process is termed as 'deductive' This process may be said to be the logical basis of testing a hypothesis

Deductive inference is reasoning from general premises to specific derived instances thereof The procedure involved may be summarised in the simple hypothesis If proposition (p) is true, then proposition (q) is likewise true As an example—'If it rains, the streets are wet' (If p, then q)

The method of deduction proceeds in the following fashion

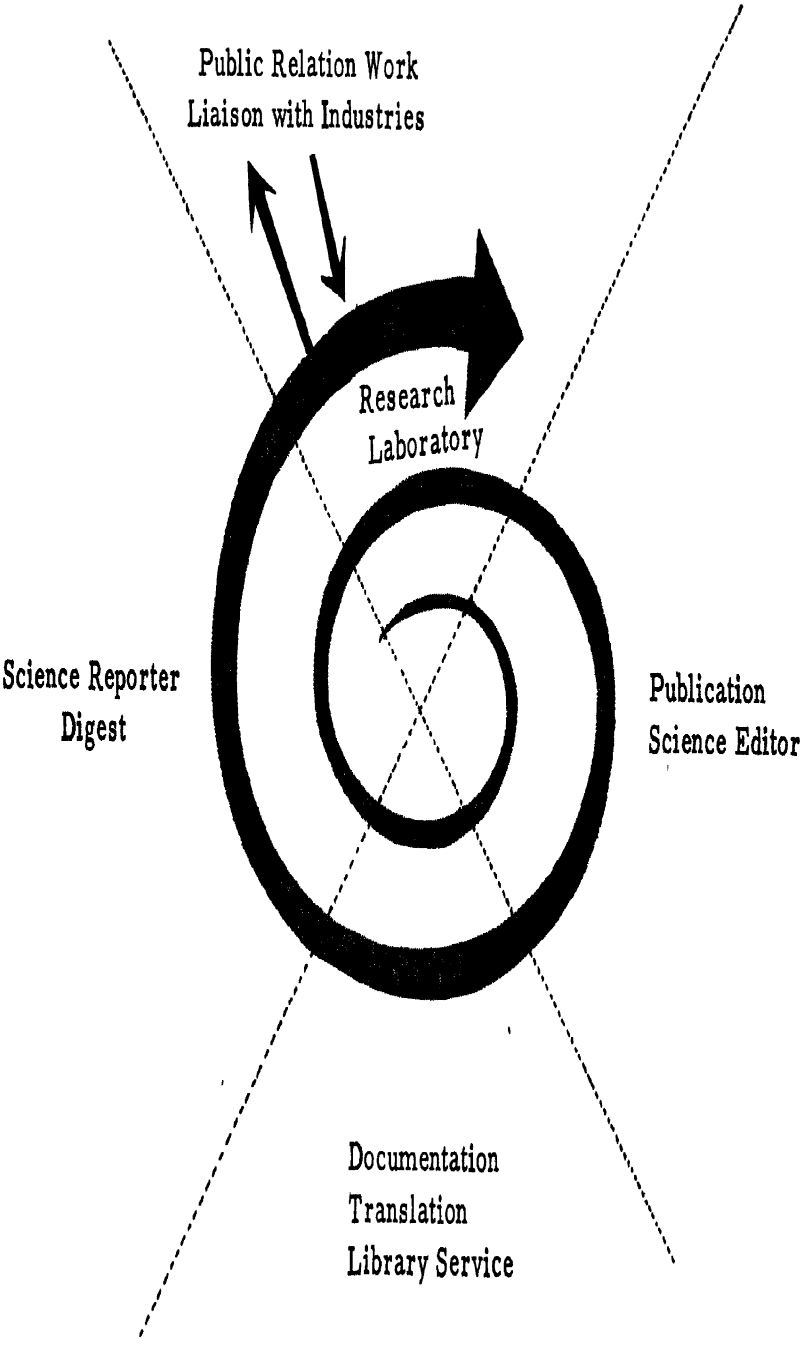
1 The general principle or premise is stated
2 A special case is deduced as an instance of general principle (and hence must fall under the coverage of the principles)
3 Inference, conclusion, proof or demonstration results therefrom

Thus when we say that a hypothesis is verified it means that the hypothesis explains the concepts or facts which it sets out to explain In science it may mean that the hypothesis gives the cause of the phenomenon explained

Thus we land upon the concept of cause and effect which is the touchstone of the scientific method Fundamentally scientists are causationists A cause is a relation between phenomena One event gives rise to the next applying a certain factor and it brings out other definite changes

The first modern and also the most devastating philosophical treatment of causation was advanced by Hume about two hundred years ago He concluded that knowledge involving causal relation is uncertain and at best only probable According to Hume, the statement—'A causes B' means that A and B are found conjoined The reason for the connection remains in dark Hume concluded that objects have no discoverable cause and effect connection between them Causation is not an independent relation but merely a sequential derivation

But now science is becoming increasingly aware of the interconnectedness of events in the universe. Events are being considered as inextricable features of a totality. Accordingly the causality may be viewed as the system under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Science Reporter
Digest
Publication
Science Editor
Documentation
Translation
Library Service

certain conditions which brings emphasis upon a single fact of a myriad components According to this cause, when it implies only a single factor, it is meaningless In other words cause and effect are uniquely related to one another and there is an element of necessity in their relationship Thus only when a hypothesis shows that a consequence is deductively necessary then only it succeeds in explaining the fact

2 Spiral of Scientific Method

Thus scientific method consists of three processes Namely observation, formation of hypothesis and testing of hypothesis. It is one of the most important and more recognised methods for developing knowledge Dr Ranganathan has characterised the working of scientific method by a never ending spiral movement He has schematically represented it in a diagram[6] which is being reproduced here for a better understanding of the conception

Dr Ranganathan has denoted, for convenience of reference, the four cardinal points of the cycle by the terms Nadir, Ascendent, Zenith, and Descendent

The Nadir marks the accumulation of facts These arise out of apprehension of the phenomenal world—through the senses and guided by the intellect

The Ascendent marks the accumulation of inducted or empirical laws distilled out of the facts accumulated at the Nadir These empirical laws are got with the aid of inductive logic.

The Zenith marks the fundamental laws, called—"hypotheses" in the field of natural sciences These fundamental laws are formulated with the aid of intuition

The Descendent marks the deduced laws, got with the aid of deductive logic

3 Sectors

The description of the four sectors of the cycle, given by Dr Ranganathan is as follows

31 FIRST SECTOR

With the use of primary senses to accumulation of data.

1 Using the primary senses either in their native state or with the aid of instruments
2 Observing the knowees either with or without experimental interference and conditioning
3 Progressing towards particularisation and regression from generalisation.
4 Progressing towards concreteness and regression from abstractness
5 Facts found and recorded.

32 SECOND SECTOR

With the use of the intellect to the formulation of and recording of inducted or empirical laws

6 Use of intellect
7 Reasoning with the aid of inductive logic to boil down the numerous facts (collected at step 5) to a small number of inducted and empirical laws
8 Progression towards generalisation from particularisation
9 Progression towards abstractness from concreteness
10 Formulation of empirical laws and their recording

33 THIRD SECTOR

With the use of intuition to the formulation and recording of fundamental laws

11 Use of intuition unmediated by the primary senses or the intellect
12 Boiling down of the inducted or empirical laws to the very small number of fundamental laws
13 Progression towards ultimate generalisation
14 Progression towards ultimate abstractness
15 Seizing of fundamental laws and their recording

34 FOURTH SECTOR

With the use of the intellect to the formulation and recording of deduced laws

16 Use of intellect aided by itself or aided by machinery
17 Reasoning with the aid of deductive logic including mathematical and other calculuses
18 Progression towards particularisation
19 Progression towards concreteness
20 Derivation of deduced laws and their recording
21 Deduced laws must include one and all of the inducted empirical laws
22 The number of deduced laws exceeds that of the empirical laws if fundamental laws have been seized with intuition of adequate intensity

Thus we find that the process of observation corresponds to sector 1 and 2 in the spiral, the process of formation of hypothesis to sector 3, and testing of hypothesis to sector 4 and in the cycle

4 **Re-Entrance into the Spiral**

Two things happen in the re-entrance

1 Observations and experiments are made to verify empirically the validity of new deduced laws

2 Further continuous observations and experiments lead to accumulation of new empirical facts.

So long as the deduced laws are verified empirically to be true and the new empirical facts are found to be in conformity with the implications of the fundamental laws, there is no further movement in the spiral But this seldom holds good for long As and when new empirical facts appear to contradict the fundamental laws, every effort is made to ensure absence of any kind of fallacy in the process of deduction If the contradiction persists, a crisis is declared in the application of the scientific method A new Cycle gets into full swing and carries the spiral of scientific method further Thus the cycle is liable to be repeated without end

"Thus any domain in the universe of knowledge which admits of the above described spiral of scientific method, in the course of its development is a science " Natural sciences were admitted as sciences much earlier than social sciences It was possible due to

1 Observation can be impersonal and nearly objective
2 Experiments can be made without any hindrance in the case of physical sciences and with a minimum of mental revulsion even with the living bodies of lower organism
3 There has been continuous sharpening of the mathematical calculuses necessary to make induction and deduction.

5 Problem in Social Sciences

On the other hand according to Dr Ranganathan some unfavourable factors exist in the domain of social sciences[8] which can be enumerated as

1 Observed entity being man himself with all the obstructions which his mind can cause results in vitiation of observation
2 Experimentation is difficult and even impossible when man himself has to be the subject of experiment Even where it is attempted it takes several decades to collect adequate data
3 Statistical calculus necessary for work were either unknown or were found in a primitive state till about half a century ago
4 Statistical calculus and operational analysis and other tools are being sharpened these days to a degree sufficient to make allowances for the vitiations

With the development of such powerful tools many disciplines in the domain of social sciences are becoming progressively amenable to scientific method Library Science is one of the foremost examples of those disciplines amenable to scientific method

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CHAPTER J3

Five Laws of Library Science

A THIRUMALAIMUTHUSWAMY

0 Introduction

EACH branch of knowledge, be it one of Science, Technology or Art, began with a small number of concepts and facts. Man, who is by nature a mental being, has been gradually adding further to the known ideas by his observations, experiments and inferences. Each branch has thus accumulated and grown into a large body of knowledge. When the proliferation of ideas grew beyond limits, man began to correlate them. He attempted to explore the underlying principles that explain the inter-relations between the different phenomena and also those principles that unify and govern them. While each phenomenon was governed by a specific principle, a few principles were found to be all-pervasive, so to say, within each branch, by virtue of being primordial in their nature. Thus a few basic laws came to be enunciated in each branch of knowledge.

1 Library Science

The position in Library Science is no exception. The large body of facts that have grown from the time of Assyrian clay tablets to the modern microcarding developments, from the first revolution initiated by Melvil Dewey by his Decimal Classification to the modern concepts of facet, phase and zone analysis of Ranganathan, are all found to be influenced and governed by a few fundamental principles of laws, wherever use and service of recorded knowledge is practised and is of paramount importance. These basic laws are five in number. They appear to be so elemental and obvious and yet they were least followed. They are so simple and yet they so profoundly influence and have complete sway over all the domains of Library Science. These laws were enunciated in 1928 by Dr S R Ranganathan, who has elevated Librarianship to the level of a discipline in all its branches and secured recognition for it as a science so that the laws are rightly called FIVE LAWS OF LIBRARY SCIENCE.

2 Five Laws

The Five Laws of Library Science are as follows:

1 Books are for Use
2 Every Reader his Book
3 Every Book its Reader
4 Save the Time of the Reader
5 Library is a Growing Organism

Within the limits of a small article, it is not possible to describe completely the scope and influence of these basic laws on all the domains of Library Science Therefore, in the foregoing, each law is taken one by one and only some aspects of its influence on the collection, organization and service are given

3 First Law

The First Law 'Books are for use' serves to bring out—clearly that mere collection of books in the library is not to be an end in itself It must be remembered that books are collected for the purpose of enabling the people to read them Mere voluminous collection of the books is useless, if they are not utilised by the people They are not there to make every entrant wonder and sigh over the huge collection Secondly a librarian is not expected to waste the resources on very costly and rare books Only such of those books which will arouse a natural desire for reading and which will make pleasant reading should find a place in a library. Besides, such books must be carefully safeguarded also Old, worn-out and seasonal books are to be weeded out periodically

4 Second Law

The Second Law "Every reader his book" indicates what books a library should buy This implies that the library should be conversant with the needs of its clientele It should have an idea of their occupations so that it might be able to provide facilities to improve their knowledge in the fields in which they are already interested This is the primary duty of a library A school library should contain not only the prescribed text-books but also all other useful reference and relevant books in various branches of learning "The curiosity of children knows no bounds" Similarly a public library should also contain books of general interest as well as informative literature As "Books are for all", and "As the interests of the people vary in multitudinous ways", all useful books of all branches of knowledge should be found in a public library Then only every individual will feel that his interest has not been overlooked and thus will make maximum use of that library

Classics required by the academically bent scholars should find proper place along with the popular books written in a simple style to attract the attention of the neoliterates In the melee, our children's interests should not be lost sight of Books in bold type and thick paper should be made available to children.

5 Third Law

The Third Law "Every book its reader" points out that ultimately the book is meant for the reader and not for filling the stack room. Books cannot reach the hands of the readers of their own accord So it is the duty of the librarian to bring the readers into contact with books If books were to speak, they will mock at the librarian who does not do this duty and condemn him as a villain who separates the lover (reader) from his lady love, the book. Therefore, the librarian should take care to draw the attention of the readers to those valuable books which lie unused and uncared for; besides, he must give prompt publicity to new arrivals of books This could be done by inserting a notification in the press or by periodical circulars, notices and other similar devices In addition, he can also contact the students, workers and members of various associations also, through the authorities concerned and post them with the latest information This aspect of publicity is to be given greater importance in India than in other countries, for here in our country, the reading habit is yet in the formative stage Of course, this is a difficult task calling for immense enthusiasm, patience, sympathy, perseverence and hope on the part of the librarian

6 Fourth Law

The Fourth Law, "Save the time of the reader", urges that the librarian should retain the custom of those who visit the library at least once He should not lose his clientele, how is this to be done ? The best course would be to devise methods saving the time of the reader, by enabling him to choose the books he needs promptly and quickly To avoid any delay in the choice of the book, a reference librarian should immediately rush to the help of the reader, by getting to know his interests, and guiding him properly He should be gentle and kind in his approach to the reader He must have the tact of a salesman, endowed with a sincerity of purpose and sense of service The reader should be led to the shelf in which he can find the book he needs Thus the reader is brought into contact with the books The main purpose of a library is to benefit the public by enabling them to improve their knowledge and satisfy their intellectual curiosity and this salient aspect should not be forgotten by any library authority at any time

Those who come to the library should not feel that they are being unnecessarily delayed there They should not feel bored by the time the books reach their hands The zeal and the curiosity of the reader must be whetted by the library staff and this means prompt personal service. The time at the disposal of the reader could be saved in many ways This is best done by—"Open access" system adopted in the various libraries today. Under this system books are not kept under lock and key. On the other hand, they are placed in open racks, thus inviting the reader and almost enticing him to read. The reader is free to choose any book and read it there, as in his home. Besides, he can take it from the library also by becoming a member Moreover, after the introduction of the ticket system the unnecessary delay caused in entering the particulars of a loaned book on a register etc, is also avoided All that a reader has to do is to go to the rack that contains the book he needs, take it out, and place it at the issue counter along with the Borrower's ticket and then take the book out It will be exchanged for the ticket

To facilitate the reader to select the book quickly, the book should be arranged in a classified sequence on the stacks Books dealing with a particular subject with correct call numbers assigned to them should all be found arranged compactly in consecutive rows This arrangement saves the readers' time considerably

Next comes the library catalogue Dr S R Ranganathan observes that the catalogue "Must be so constructed as to further the use of books, help every reader to find his books and save the time of the reader". The readers might just remember the author and not the book, or else any other detail, like the name of the editor, or the collaborator, or the compiler or the translator or the commentator Therefore, the catalogue must be prepared with various headings in such a detailed manner as to give entries of titles, authors, editors, subjects, etc, with counter references, which will enable the reader to trace the book quickly

7 Fifth Law

The Fifth Law *viz* "Library is a growing organism" is somewhat different from the other laws The number of readers will definitely be on the increase in any library To some extent there must be a proportionate expansion in the number of books made available in the library Similarly, the number of staff members must also be correspondingly increased Therefore when a building is erected for a library, we must bear in mind to allow enough space for its future growth At least the foundation must be strong enough for erecting superstructures

These Five Laws should never be forgotten by library authorities Finally, the library building must also be attractive, kept neat and tidy The building must be free from echo It must be spacious enough to accommodate a sufficiently large number of readers Seating and lighting arrangements must be satisfactory and perfect Adequate moving space must be left between chairs and tables The place where the books are arranged in rows must enable readers to pass by without difficulty The top-most row of books must be easily accessible and there must be various guide cards in prominent places to guide to the books on different subjects arranged on the stacks Above all, the library staff must receive all persons who visit the library in a polite and courteous manner and render them all help for making full and possible use of the library This human touch will help the growth of libraries as nothing else can do

Although many have written on the philosophy of library service, it has been given to Dr S R Ranganathan to admirably reduce this into five fundamental Laws which indeed constitute the very essence of library service.

CHAPTER J4

Implications of the Five Laws of Library Science

GIAN CHAND

1 Dr Ranganathan's Contribution

DR Ranganathan's contribution towards the development of Library Science is unparalleled. He has not only evolved a system of classification, the Colon Classification, which aims at perfection in every respect but has also written a number of valuable books and articles on different aspects of Library Science. One of his outstanding contributions towards the efficiency of library service is his summing up of the principles of efficient library service in the form of "Five Laws of Library Science". If librarians keep these laws in view and endeavour to put them into practice in the spirit in which they are meant, the library service can improve considerably. These laws serve as a guide to the librarian in making his library an ideal one, not only in respect of his outward appearance but also in respect of the services it has to perform. It is not intended in this article to enunciate these laws in detail, but an effort is made to describe the significance of these laws briefly so as to refresh the minds of librarians about the urgency and importance of these laws and to impress upon them the necessity of always keeping them in view during their day to day work.

2 Five Laws

The five Laws formulated by Dr Ranganathan are:

1 Books are for use;
2 Every reader his book;
3 Every book its reader;
4 Save the time of the reader; and
5 Library is a growing organism.

These Laws were first formulated by Dr Ranganathan in 1928, although they were enunciated in detail by him in 1931 in his book *Five laws of library science*. These laws cover all aspects which the librarian has to care for, e g library building, library equipment, publicity, book selection, classification, cataloguing etc Now let me take these laws individually.

3 First Law

The bigness of a library lies not only so much in the number of volumes it possesses, but in the use to which its collection is put Thus the librarians should try to encourage liberal or rather unregistered use of books He should provide inducements for the readers to come to the library freely and to make use of the books collected in the library This can be achieved by the following steps

(*i*) *Publicity*· The librarian should give fair publicity about the services offered by his library He should also publicise new additions to the library so as to inform his clientele to what new material has been acquired. Latest arrivals should be displayed In specialised libraries it will be useful to prepare abstracts of publications and articles and circulate them among the clientele

(*ii*) *Building:* The library building should be attractive Its interior too should present a neat and healthy appearance There should be proper lighting and ventilation

(*iii*) *Equipment.* The library equipment should be neat and attractive. The book racks should not be very high, they should not be more than 7′—3″ high so that the reader's eye can easily reach the topmost shelf while standing on the floor The Reading Room should be attractive and the chairs should be suitable for continuous sitting for long periods There should preferably be separate arrangement for those engaged in serious study, e g research scholars

(*iv*) *Regulations* Regulations should be so made and interpreted that readers can use the books freely

(*v*) *Open Access* Access to the library shelves should be unrestricted so that the readers can go to the shelf and pick out the book most suitable

(*vi*) *Co-operation of Library Staff*· Staff should be genial towards the reader and should always be ready to help the reader

4 Second Law

This law emphasises that the library should have in stock all that its clientele is expected to demand The librarian and the members of the book-selection committee should know the subject fields, in which the clientele of the library is interested Books should be procured keeping in view all the classes of readers, e g from the elementary to the advanced.

5 Third Law

The librarian should see that every book in the library is used It is the duty of the librarian to do everything necessary to get readers every book He should bring to the notice of the prospective readers the arrival of new books and should also bring to the notice of probable readers the books which have not been used for long periods. Not only should the new arrivals be displayed, but the old neglected or forgotten books should also be displayed occasionally

Proper cataloguing can also help in the use of the books A classified catalogue, with analytical entries for all the hidden subjects in a book, will go a long way in this direction

This law gives some advice about book-selection also Books which are not likely to be demanded by readers should not be selected for procurement

Open access can also help a lot in this respect In open access the reader can come across books which he would not have cared to select from the catalogue

6 Fourth Law

Books should be made available to the reader without delay This is the law which really puts to test the efficiency of the library The method of classification, cataloguing, issuing of books, proper shelving of books etc all play an important role in saving the time of the reader

61 Classification

(*i*) Books should be classified as quickly as possible after accessioning, so that the books go to the shelves without any time lag Effort should be made to make a book available to the readers within a week of its arrival

(*ii*) The system of classification adopted in a library should be such as can serve readers of all classes It should enable one to distinguish between elementary books, advanced books and books of intermediate coverage on any subject In a specialised library, that system of classification should be adopted which enables literature on the minutest aspects of a subject to be indexed properly The Colon Classification evolved by Dr Ranganathan and the Universal Decimal Classification are both well-suited for the specialised libraries

62 Cataloguing

The cataloguing should be done systematically so that the reader can pick out quickly what he wants. A classified catalogue, with separate author, subject and title catalogues will be found more useful than a dictionary catalogue, particularly so in the case of specialised libraries. Analytical entries should be made for all subjects dealt with in a book but not apparent from the title of the book

63 CHARGING METHODS

The method of issuing of books and receiving them when returned should be such that not only the reader does not have to spend much time at the charging or discharging counter but the library staff too also takes the least possible time in compiling his record Any of the two commonly known methods of charging ie the Newark method or the Browne method, can be used with necessary modifications suited to the requirements of individual libraries.

64 SHELVING

The books should be so arranged on the shelves that not only can they be found out easily, but the reader interested in a particular subject should be able to find them together A classified arrangement according to subjects is therefore preferable

65 OPEN ACCESS

Open access saves not only the time of the reader but saves the librarian also a lot of work

7 **Fifth Law**

Library is an ever-expanding organisation The growth is of three kinds—growth in size, growth in the number of readers, and the growth in staff

71 GROWTH IN SIZE

Every library grows in size with the acquisition of new material A newly started library has to grow in size rapidly because to serve its clientele fully it has to equip itself as quickly as possible with all the books required to serve its clientele, but when the library has attained a degree of adulthood, the growth will naturally be slow Unlimited growth creates many problems, the most serious being the finding of adequate space and staff The library building should be planned on a long term basis, taking into account the normal expected expansion for say about 20 years. There should be a limit beyond which a library should not be allowed to grow Efforts should therefore be made to control the growth in size by continuously weeding out old and no longer wanted books.

72 GROWTH IN THE NUMBER OF READERS

The growth in the number of readers shows how popular is the library and how well it is serving its clientele. Growth in membership does not depend merely on the number of books available in the library but chiefly on the services offered by the library The membership can continue to grow rapidly even if the growth in size of the library has become slow, provided the services offered by the library are to the liking of the readers The librarian should therefore make every effort to make the library services easily available to the readers and to publicise the activities of the library to attract more readers

73 GROWTH IN STAFF

With the growth in size and growth in the membership there has to be corresponding growth in the staff Efficiency of the library services can be maintained only if there is adequate staff The library authorities should therefore see to it that adequate staff is provided Dr Ranganathan has, for this purpose, evolved a staff strength formula which can be usefully adopted to the needs of all libraries

PART - K

LIBRARIANSHIP

CHAPTER K1

What is A Library

A G Solomon

0 Libraries in the Past

A LIBRARY by itself is an educational institution. It is a school of self education. In the ancient past the teacher taught by word of mouth. Man was the book. Though language was the means of communication there was no means of preserving his thoughts. Slowly he began to evolve the written language. He carved pictures on wood and stones and evolved the alphabet. He wrote on clay tablets, papyrus and palm leaves. They were made into books and they were collected and preserved in libraries. A library may be defined as a collection of books.

01 LIBRARY WITH CONVENTIONAL BOOKS

The invention of printing in the earlier centuries made production of books easy. Yet the idea of collection and preservation was deep rooted in the minds of the people. When books were rare and difficult to produce this tendency might have developed and the libraries became merely store houses of books. The librarian was particular about preserving and safeguarding the books. He was a bar at one stage, between the reader and the book.

02 SOCIAL PURPOSE

As the technique of printing improved books were produced in thousands. People began to understand the value of books and the publishers had the readers in mind and the main aim was to make profit. A book shop is also a collection of books but the collection is made for profit. A library is also a collection of books; the collection is made not for profit but for a social purpose. It is for the use of the contemporaries and for posterity. A library is a collection of books for use.

1 Definition

It was the definition recorded in the *New English dictionary* published in 1901, that made explicit reference to the users forming a factor in libraries It gave the following definition. "A library is a public institution charged with the care of collection of books and the duty of making them accessible to those who require the use of them" This definition makes the user only a permissible factor

2 Laws of Library Science

The purpose of collection of books was vaguely understood A library is a collection of books for use What is meant by use was thoroughly investigated by Dr Ranganathan and formulated into principles for its application in his Five Laws of Library Science

Books are for use,
Every reader his or her book,
Every book its reader,
Save the time of the reader, and
A library is a growing organism

21 Implications of the First Law

The implications of the first law that books are for use led to open access system There must be no bar between the reader and his book, he must have full and free access to the collection The objection was about the loss of books It is a negligible factor when compared to the enormous increase in the use of books If there is a heavy loss of books the matter must be investigated and the cause for the loss found out and action taken The implications of the first law resulted in a change in the technique of classification, cataloguing, shelf arrangement and administration

22 Implications of the Second Law

The conception that every reader his or her book led to a complete change in attitude in this age of democracy Books are not for a few, not for the rich nor for the older Books are for the poor, children, men and women, research scholar, the professional and non-professional, the blind, the rural and urban people and for all The second law made the books get into every corner of the village and town and into every part of the country Madras state was the first in India to undertake legislation to provide books for the public It was due to the vision and inspiration of Dr S R Ranganathan that such a legislation could be brought about in this country Now similar legislative acts are passed in several states

23 Implications of the Third Law

The third law, every book its reader, is very important Every book must find its reader A book not used is a waste A real enquiry must be made into this problem. Many books, even the latest additions are not used. Some books are never handled except by the dusting peon. Though having the same general heading some books may be above or below one's standard. We have to stratify the reader as well as books and evaluate how many are really used. It is the books that are not used that worries the librarian In spite of the aids of classified catalogue, analytics, reference help and publicity, books do not find their reader

24 Implications of the Fourth Law

The fourth law, save the time of the reader, has resulted in a thorough change in the technique of library administration and in methods of finding information quickly. Time is money and if we save the time, it saves money for the reader, the staff and for the administration The changes brought in catalogue, classification, issue methods, open access and administration techniques have helped the implications of the fourth law

25 Implications of the Fifth Law

The fifth law that the library is a growing organism is the result of the use made of the library As the library is used books will be added continuously and there will be need to add to equipment, building, staff etc.

3 Documents and Libraries

The implications of the five laws of library science leads us to higher levels A library is the treasure house of knowledge as contained in a collection of documents There is change in the very terminology. Books are called documents A document is embodied thought There are macro documents and micro documents, their meaning loosely fixed by convention Ordinarily a book greater in size than a pamphlet may be said to embody macro-thought So also a pamphlet, an article in a periodical, a section of the book, a picture or a map may be said to embody micro-thought Besides documents consist of documents conventional and non-conventional, the conventional type consists of books, periodicals, braille, music sheet, manuscripts etc and the non-conventional are the microfilms, micro cards, sound-records, talkie reels and others. They are all instruments for transmitting knowledge and libraries are treasure houses of knowledge

31 Open Sesame

The term treasure house of knowledge brings to one's mind Ruskin's "Kings' Treasuries" and the society so numerous and so gently, Kings and Statesmen lingering patiently to be heard. The librarian has his own "open sesame" for throwing open this great treasure They are classification, catalogue, reference work, documentation and administrative techniques

4 **Classificationists**

The most difficult task is the designing of a classification scheme and it has been accomplished only by a few in the whole world Among these noteworthies may be mentioned Melvil Dewey, Charles Ammie Cutter, James Duff Brown and India's pride Dr S R Ranganathan with his Colon Classification These persons who design a classification scheme are called classificationists and others who do the classification work based on a scheme are called classifiers

41 CLASSIFICATION SCHEMES

It was Melvil Dewey, the genius, who made the first systematic attempt at classification His classification is called Decimal Classification because decimal was the notation used to meet the expansion of knowledge without dislocating previous number His scheme was not adequate and others began to construct their own systems. These are of two types—enumerative and analytico-synthetic Dewey Decimal Classification and a few others belong to the enumerative type because the numbers have been worked out fully The Universal Decimal scheme and the Colon classification belong to the second type In the Colon classification readymade class numbers are not assigned to topics The schedules contain certain standard units corresponding to standard pieces in a meccano apparatus and by combining the classes the class numbers of all topics are constructed

42 FUNDAMENTAL CATEGORIES

In library classification one has to consider the theory of knowledge classification as well as the theory of book classification The universe of knowledge includes all knowledge past, present and future, known and unknown So the universe of knowledge has to be considered as universe of classes rather than as universe of entities Besides books as containers of knowledge have their special problems There is vital connection between these two The universe of knowledge is vast and unrelated It is the plane of the philosopher and it has to be brought under some system In the metaphysical sphere, it is similar to Plato's theory of Ideas One may not go to that extent in library classification Dr S R Ranganathan, the philosopher librarian, has brought all classes of knowledge under five fundamental categories Time, Space, Energy, Matter and Personality In the empirical sphere the categories could be applied to knowledge contained in books. Even Plato in spite of his theory of Ideas divided thought into physics, ethics, and logic Dr Ranganathan is also moving towards the discovery of primodel classes which are fundamental and may change only in detail

43 Facet and Phase Analysis

The Colon scheme after spreading out the main classes gives statement about the characteristics to be used for division and the rules for combining them The Colon is the symbol used when one characteristic ends and another begins Thus each part is allowed to develop fully for itself There is hospitality in arrays and chains and modulation effected on principles The classification takes note not only of the subjects but also the attitude The subject of the book consists of layers of ideas folded together which Dr Ranganathan calls lamination and they are peeled off by Facet Analysis, based on fundamental categories which manifest themselves in the same subject in different rounds and levels Besides there are some subjects which have close affinity with other subjects which he calls "loose assembly" Their relation is worked out by Phase Analysis

44 Other Techniques

Each of the analysis has its own symbol Dissection with Octave notation, denudation with decimal fraction notation, facet with facet notation and loose assemblage with phase notation The eight devices also give the Colon Classification great flexibility and hospitality The notation is vital to the scheme The whole field of knowledge is analysed into three planes, the plane of idea, the plane of language and the plane of notation The result of the analysis is coextensiveness of knowledge which is not achieved in any other scheme The depth classification helps the classification even of the micro-thought

5 **Among the Immortals**

This type of self-perpetuating schemes are mainly associated with the name of Dr S R Ranganathan Bernard I Palmer writes, "While most students are aware that Dr Ranganathan has produced the Colon Classification, very few realize that the understanding of principles which has sprung from this scheme is probably of far greater importance than the scheme itself Dr Ranganathan claims to have succeeded in analysing the infinite variety of human knowledge in term of five fundamental concepts—Matter, Space, Energy, Time and Personality Some of these, he says, are present in some form in all subjects. This is not all, however, he was the first to attempt (and here he undoubtedly succeeded) to separate the characteristics used for division, thus allowing the division of a class to proceed along two or more lines of division at one and the same time Palmer has placed him among the "immortals of our profession"

6 Cataloguing

Another sesame that opens the treasuries of knowledge is the catalogue The reader is interested in specific subjects and the catalogue must spread before him the resources in helpful sequence A catalogue aims to help every reader to find his book and every book its reader There are two types of catalogues, the unipartite Dictionary Catalogue and the bipartite Classified Catalogue The Classified Catalogue is more popular There are codes for arranging the entries of the catalogue and Dr Ranganathan was the first to compile the complete code of a classified catalogue The catalogue consists of different facets—author, title, specific subject, cross reference, serial and analytics One book one entry was the order of the day once but now it has resulted in many entries to throw open the treasure house of knowledge The ordinary reader knows about the author, title and subject entries, but he may not be aware of the cross references which connect the related subjects and the analytics which analyse the macro-thought into micro-thought and take the reader to deeper levels of thought. The analytics must even lead to the index contained in the books for specific topics The analytics and directions to the index of books will vary according to local conditions

7 Reference service

But the catalogue cannot be the guide, friend and philosopher They are mute entities only. The librarian has to help the reader even after getting into the open shelves. The information may not be suitable to his needs What exactly he needs the reader is unable to specify immediately, the problem may be too wide or too narrow and it is the reference librarian who after politely questioning his need is able to suggest the proper location of the information The reference librarian like a salesman must know his wares, the books, as well as the reader He must be able to suggest the right book to the right reader, at the right time in the right manner Besides he has to make ready reference and long range reference slips and maintain the reference cabinet

8 Documentation

Another aspect that the library is a treasure house of knowledge is regarding documentation work and documentation service which have to deal in an exhaustive and pinpointed manner the nascent micro-thought in the articles in periodicals for specialists and research scholars Their research production to the sum total of knowledge and thus libraries are not merely treasure house of knowledge but extend the frontiers of knowledge

81 POWER-HOUSE OF KNOWLEDGE

Even this definition of a library as a treasure house of knowledge as contained in a collection of documents is not satisfactory. It is static in conception. A better difinition will be a library is a power-house of knowledge It is more dynamic in its content Dr Ranganathan writes "a library is a kind of social power-station where the minds of the members of the community are energised The thought energy which lies locked up in a potential state in books is transformed by librarians into a kinetic state which can stimulate the minds of readers into helpful activity Thus libraries represent transformation of energy " He compares it to an electro-magnet An electro-magnet is a piece of soft iron surrounded by a coil of wire through which electricity is passed The power and the value of the electro-magnet lie neither in the core of the soft iron nor in the coil of the wire, nor in the electric current severally. They come into existence only when the coil surrounds the core and the current passes through the coil

82 THE TRINITY

Similarly it is not the books alone, nor the reader nor the librarian that make the library It is the trinity of book, reader and librarian that constitutes a library The library becomes a power-house of knowledge only when all the three act together It is not the trinity of books, reader and librarian that constitutes the library but all of them interacting on one another that results in the transformation of a library into a power-house of knowledge. The librarian is a dynamic personality It is the personal element that gives vitality to the library. The librarian must know the book as well as the reader He must be the canvassing agent for the books which are mute entities helpless unless helped by the librarian He must know the readers and increase the number of readers by his sympathy, attention and scholarship He must meet the reader at all levels Besides he must be a specialist in his own field It is the librarian that makes the library and energises the community through the books Books make the real changes in the minds of men The writings of Voltaire, Rousseau, Karl Marx, Gandhi and others have brought about revolutions in this world Some books lead to discovery and invention useful for mankind Some make the authors to write more books and the research scholars to produce something original. There are some books which are immortal and some transform the character of individuals and society Books like the *Bible establish Kingdom of God on earth* Thus the library is a social power-house where the minds of the community are energised

83 INDIA ON THE LIBRARY MAP

The term library must not be confined to one's own locality. It must comprise the knowledge contained in the libraries of the whole world The interlending of libraries will help to get any document anywhere in the world under international control This will take time and the United Nations has to bring the national and international organizations under its control and make it effective Dr S R Ranganathan is a member of many of these international organisations and by his genius, vision, scholarship and research, has placed India in the world map of Library Science

CHAPTER K2

Importance of Library in a Developing Country

NUR ELAHI

1 Role of a Library

A LIBRARY today is a very important institution. Its aim is to educate the illiterate, dispel their ignorance, and to give opportunities for further development to the educated. The contemporary notion of the library of today is fundamentally different from its old conception. In the past the library was considered to be merely a repository of books. Its use was restricted to a chosen few. The public had no access to the books. As a matter of fact the common man was so illiterate and ignorant that the written word was beyond his comprehension. Therefore, in those days the main ideal was the preservation of books rather than their functional use. But this outlook is totally obsolete in our own times. The library has become an integral part of public education. It is an indispensable agency through which mass education is imparted on a universal scale. The object of the library is not to collect and preserve books but to promote the free use of books. Knowledge for every body is the slogan of this age of democracy. In view of the modern concept of the library we are naturally faced with the question what is then the social benefit that comes out of the library ? What is the social good that the library does to the community ? The answer is: it informs people, it inspires and provides an intellectual stimulus to the members of the community. This is the distinctive contribution which it makes for the service of the community. As a result of this change, the position and the work of the librarian have also undergone a phenomenal change. He is today an essential factor in the implementation of an educational plan and for the social and cultural betterment of community the importance of his role today is indisputable and indispensable.

2 Library Service

The people of developing countries can easily understand this proposition by taking the example of Western nations. Even in social life both in villages and cities the people of the developing countries have no idea about the enlightenment which is being broadcast by scientific and technical advancement of our age. Many countries which are at present the acknowledged leaders and standard bearers of civilization were wallowing in ignorance and backwardness only a few decades back Take the case of Russia which in the era of Revolution in 1917 was one of the most backward countries of Europe But within a span of 45 years it has become a leader in the field of scientific and technological advancement This miracle has been achieved only by concerted efforts towards mass education Some of the more outstanding examples of supreme achievement in this field are those of Great Britain and U S A. Their entire progress can be attributed only to mass education on a universal scale It can be further illustrated by the fact that library services in these days are considered to be an integral part of the diplomatic service The Americans have established their library and information centres in every country where they have the diplomatic mission. The chain of the British Council Libraries is another pertinent example to that effect In short, every country tries to disseminate social and cultural influence through the medium of Library Service

3 Library System

Every Western country is today literally covered by a net-work of libraries reaching out to the farthest nook and corner of the country. The library service is organized according to a master plan beginning from the top and enclosing the most far flung quarters within its frame-work There are national libraries at the top The state libraries and town libraries serve urban areas while district libraries serve the rural sections of the community These libraries reach the innermost recesses of the country through mobile vans

4 Developing Country

This is high time that people in a developing country should also devise a library system with a district library maintaining a mobile service to take books to people in the villages The district library should be linked up with the town libraries, which should work in coordination with the provincial library The provincial library should further be integrated with the national library The introduction of a library system on a country-wide basis and establishment of community centres have specified importance for such a country for promoting the growth of the community A library should be a genuine centre for adult educational activities Nothing in the field of national reconstruction can be accomplished unless some definite and determined efforts are made towards the education of the masses

5 Reading Material

When once such libraries have been established and community centres set up, one would be faced with the question of providing suitable reading material

In some countries there is an inordinate emphasis on the production of textbooks written for students in schools and colleges. On the other hand there is a lamentable scarcity of popular literature for the masses. If we look into the social and moral conditions of masses in these countries seriously and survey the prospects of an educational renaissance on a country-wide basis we can affirm unhesitatingly that people can become literate only if organized and large-scale production of books on all the various phases of national life which affect the well-being of the citizen, is taken in hand. There is an imperative need for books written in a simple, direct and attractive style on topics like religion, politics, economics, agriculture, handicrafts, health, hygiene and games Such books should be prepared in the native language of each country They should be in consonance with the mental level and standards of the masses Fiction and story books have a wide popular appeal but they are not very helpful in raising the intellectual and moral standards The librarian must not only understand books but must also understand the community with which he has to deal with

6 Audio-Visual Aids

A spacious and well-equipped auditorium constitutes an integral part of a public library today It should maintain a section of audio-visual aids with projectors, tape recorder and radiogram It should also organise exhibitions and arrange for public lectures, seminars and panel discussions. Services like these would meet more than one purpose They would transform the library into a radiating centre of light and learning and they would save the audience from the drudgery of book reading although it has specific benefits of its own Secondly it can be an asset to the publicity of the library itself The reader who feels rather lukewarm in visiting the library will certainly experience some kind of excitement for the audio-visual and the auditorium section of the library The new experience would help in stimulating and strengthening in the long run his reading aptitude as well

7 Mobile Service

Library service can be developed in several other directions as well and one of them is its extension service Instead of circumscribing its activities within the four walls of the library, it can go out to the community and serve distant places through a mobile van and a deposit station. Under a well planned system of library service areas may be demarcated for each public library where mobile units can visit the localities which are not within a manageable distance from the central library. This system has been adopted with considerable success in many Asian countries and such projects can yield equally beneficial result in others.

8 Requirements of Children

We should also give consideration to the needs and requirements of children in the public libraries If a library habit is cultivated at an earlier stage in life, it would be a life long asset to them They cannot outlive its great impact and deep impression It is, therefore, in the fitness of things that each public library should introduce some special features to attract the maximum attention of children and to reclaim them from the unhealthy pursuits which cripple and deform their personality There can be a cultural section for children in the library where they can be provided with books, some indoor games like toys and meccanoes and various other games They will help in providing opportunities for their creative and recreational urge Story hours and puppet shows may also be arranged for the benefit of the children These progresses may prove also convenient to the parents who can hardly find enough time for the development of the socio-cultural background of their children out of the relentless routine of their daily occupations A public library could provide free service to them in this respect

91 Library Service

A word about the duties and the status of the Librarian of a public library will not be out of place at this stage I hope I would not be accused of an over-estimation when I say that librarians should possess a high rank among the architects of a community At present they have neither a social status nor the required professional prospects which could prove a real incentive for their work On the other hand if the librarians have a genuine desire to be included among the benefactors of community they should take "Service" as their motto and mission in life I use the word "Service" with all emphasis Because it is not only the collection of books which makes library big and really useful institution I feel it is the "Service" which is the essence of librarianship

92 Re-Discovery of Past History

All those countries which are now bracketed as developing countries need not adopt the modern concept of libraries as something innovatory or borrowed from the West From Mediterranean to China and southward to Indo-China and Indonesia, there were in the past many flourishing centres of civilization The historical records of these civilizations provide an eloquent testimony to the fact that libraries and universities were always given a high place in the cultural set up of the countries of these regions. Some of the first libraries established were in Messopotamia There were universities and libraries in the Indo-Pak subcontinent and similar centres are recorded in the history of all Asian countries Thus for the people of these developing countries, library service is only meant re-discovery of an important chapter of their past history and adapting it under changed circumstances for the good of the common people

93 Survival of Democracy

In modern times, the need and necessity of a really dynamic and effective library service, is further manifested by the rise and spread of democratic institutions in these countries. Democracy is an alien institution and for its proper cultivation and entity a specific type of climate of opinion has to be developed. Education is the only panacea for this. Without education of the masses, democracy is bound to be a failure What libraries can do for the mass education has already been pointed out and need not be repeated

94 International Co-operation

In the end it will not be out of place to mention that all the developing countries have limited resources, and a highly developed library system is fairly expensive Such an inability, however, can be remedied by mutual co-operation of the countries concerned Plans like Colombo Plan can be formulated under which there can be a constant interchange of experts among various countries They can exchange information and even provide each other books and material.

CHAPTER K3

Philosophy of Librarianship

JANG BAHADUR KHANNA

1 Recorded Knowledge

LIBRARIES have been the storehouses of man's boldest thoughts, his highest aspirations, his wisdom, wit, knowledge and art since the times of the earliest civilizations. The book, whether made of clay, papyrus, parchment or paper, has always kept thought alive, kindling new ideas even in periods of apparent cultural stagnation. Preservation of the written records of the past and present has always been vital to society and becomes increasingly so as science, philosophy, literature, the arts and the social sciences explore new frontiers. Without them man's knowledge would be reduced to only the small portion of the total which he could learn from people within the range of his own hearing, and our culture as well as civilization would soon vanish. The custody of these records must be entrusted to persons whose knowledge and devotion to their trust qualify for that responsibility.

2 Librarianship

Librarianship involves a dedication of spirit and intellect to the preservation of knowledge and the protection of free enquiry. The librarian becomes a servant to the scholar, scientist, investigator, student, general reader or any one who seeks knowledge. The concept of the librarian as a public servant whose function is to bring books and readers together, is a relatively new one which is introduced in India by the doyen of librarians and Father of Library Science in India, namely Dr S R Ranganathan who has evolved five golden principles of Library Science around which the entire work of the librarian revolves. Indian librarianship has made major contributions to popularise this concept not only in urban areas but in rural too through the saint's band of worthy workers like S Das Gupta, P N Kaula, and others without whose selfless devotion this concept would have not got so much currency in Indian libraries as we find now.

3 Discipline

The discipline of librarianship demands intensive and continuous study and an imaginative approach to the stimulating task of uniting books with readers. This concept and philosophy of library service requires of those who practise it not only a generous store of knowledge but ingenuity, and persistence in search, tireless application, wide reading, sharp acumen, sympathy and patience, thoroughness and meticulous attention to detail The librarian should be practical and economical and should love simplicity He must be fully equipped with the knowledge of methods of research-hand in the ways of creative readers, in whose service he spends his entire span of life. He should himself be able to engage in research to dive deep into the inner recesses of universe of knowledge because many of the problems he will encounter in his capacity as servant and helper to the thinker and creator can be solved only by original investigation. Therefore, the librarian is expected to possess in equal measure the attributes of the scholar and the educator. He must bear in mind the necessity and urgency of serving with equal care and devotion all of his library's patrons according to their requirements, from the knave reader to the erudite scholar The librarians have the sacred duty of inculcating a spirit of dedication for service among the library staff which will insure the wise discharge of the varied responsibilities and would provide, thus, incentive to promote research in the principles and methods by which libraries can most effectively perform their functions

4 Librarians

The librarians should be young persons of exceptional intelligence, character and vision so that they can successfully tackle the multiple problems and responsibilities of library service with maturity, understanding and imagination He must be thoroughly imbibed with and tutored in the fundamental values of culture so that he can develop the qualities of maturity, leadership and the power of broad comprehension of library's significance for the cultural institutions of the modern era The actions of librarians of the present century can have the utmost effect on future generations. In the continuing struggle of ideas throughout the world, the canons of impartial enquiry and free thought are constantly being tested Hence the librarians have a pious duty to both present and future generations to preserve and make readily available all the treasures of knowledge, ideas and view points so that freedom of enquiry may be maintained for the present generation and for posterity

CHAPTER K4

Librarianship : A Science or an Art?

H K MAJUMDAR

1 Emphasis on Science

THE post-renaissance period is, in fact, the period of science. Trends of human minds were all diverted to explore the mysteries of nature resulting in mighty discoveries to their maximum benefits. Men have practised to observe every phenomenon of nature with scientific acumen and thus it has placed men in a very advantageous position to learn the secrets of nature. Science is harnessed to the service of our everyday life. Consequently, it has almost become a fashion to term every phenomenon of life as a science. It is so done sometimes deliberately to enhance the prestige of the subject in these days of scientific achievements. It gives generally an impression as if the days of Arts are gone and past, and no glamour and dignity is associated with the term. Every fifty years back, so many sciences were not heard of. Some of them are really the outcome of human intellects and painstaking investigations, but some are in fact the offshoots of human ingenuity in terminology. All the subjects associated with our day to day use are getting used to be termed as Science. It is no wonder if in near future Art itself is termed as *Science of Arts*. Deep investigations to find out the frenzy may likely lead us to the conclusion that Science has become the hero of the age for it is predominating over all the phenomena of our life. Today the Science is challenging the nature. Nature created the universe. Science created the Sputnik. Science has started creation—creation of space and matter. So the term itself has attained a sense of dignity and pride. We also do feel proud of enhancing the dignity of a subject by associating with it the term science.

11 DISTINCTION WITH ART

For all practical purposes, it is very difficult to distinguish between the science of a thing and the art of a thing. Barring very few subjects, the distinction is very delicate. Generally speaking, the process of doing is *art*; and the process of knowing is *science*; and in these two processes of 'doing' and 'knowing' many factors involve in common. They are so much interlinked that they sometimes seem to be one and the same.

12 Meaning of Science

Science means knowledge ascertained by observation and experiment, critically tested, systematised and brought under general principles Dr Taylor writes, "It is quite clear that science has two main objects—to enable men to do, and to know The first was perhaps the earliest, for it would seem that the development of crafts may be traced to an earlier period than, for example, can astronomical speculations, but in the modern experimental science of the years since 1660, both aspects have always been present and complementary "

Every man is directly and vitally concerned with the science whether he knows it or not The history of science begins with the history of crafts made by the early man-like creatures Now, what does science actually do ? It collects material and from them it establishes laws, theories and explanations. Dr Ranganathan in his *Five laws of library science* claims, "The formulation of the five laws has set the spiral of scientific method into action This justifies deeming library science to be a science "

2 Librarianship

Librarianship has its two aspects (1) Mechanical, and (2) Intellectual The mechanical aspect deals with the interpretation of the library stock and devices to the speedy service to the library users It includes cataloguing, classification, display and some other organisational methods The library staff are to follow some sets of rules (not laws) to maintain uniformity in all libraries and efficiency in service Despite best efforts, these rules are not uniformly followed in all the libraries over They are modified to suit the particular institutions The intellectual aspect involves in all the processes that help assimilate knowledge This aspect is purely academic in nature It includes technical and general knowledge of the librarian and his staff, their keenness to help readers when they need it most, proper selection of books taken in view of the nature of the constituency Either of the aspects hardly demands scientific methods to be followed with The amount or degree of observation and experiment required to make library service efficient is always essential in day to day phenomenon of our life and this is all the more required even in arts Crafts which preceded science required some amount of observation and experiment before, to attain perfection from the point of view of utility. If there is any law in library administration, it is the law of convenience and it is supposed to vary from library to library Scientific laws are true everywhere and everytime Under the given conditions, all the scientific laws are guaranteed to yield the same results In the case of library science (?) it is not so the least.

3 Laws

Laws are the rules of action established by authority, if they are not natural laws They are, in fact, some codes that guide our actions in the society as moral beings or in the field of science as the case may be Dr Ranganathan's five laws are not laws in this sense They are some facts narrated—they are some bare truths observed and exposed in the light of the change in the pattern of our society and more correctly, the advancement of human faculties His five laws suggest expansive use of books, elimination of discrimination in users and throws light on the growth of libraries Those peculiar phenomena were prevalent in our society which was neither enlightened nor liberal as it is today due to some circumstances which were beyond its control No laws were enforced in our society to remove those obstacles which Dr Ranganathan referred to his first, second and third laws They disappeared like mists with the sun rising in the sky His fourth law emphasises on the point of quick service or, in other words, efficiency of the library service This particular phenomenon in the library economy was efficiently present even in 240 BC and with the advancement of technology, improvement on this score is more spectacular today.

His fifth law that the library is a growing organism is a simple but old observation This point has already been dealt with at length (Majumdar) in the article 'Growth of a library[1].' Librarianship concerns with human minds which are very flexible by nature to observe and experiment with It is wellnigh impossible to form an opinion about a man by observing his conduct at a given time A sensible man throughout his life can happen to commit a murder in a spur of moment It is bibliography, the only subject in Library economy, which involves some degree of scientific methods

4 Library Science

The *Encyclopaedia of librarianship* has devoted an article of fairly good size on Education on Librarianship The first school of Library economy in the USA was founded at Columbia in 1887 The first examination in Librarianship was held in Britain by the Library Association in 1885 The coinage of the word 'Library Science' is recent in origin The librarian is required to show more skill and dexterity in cataloguing, classifying and displaying books and prompt service to the readers As already discussed, the other aspect of the librarianship is purely academic, no laws and methods can be of use to the librarian in developing his personal faculties of wisdom and knowledge Science is a misnomer to out vocation. It is more an art than a science.

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PART I.

LIBRARY MOVEMENT

CHAPTER LI

Libraries in India: Yesterday and Today

S SWAMINATHAN

0 Library at Alexandria

HISTORY records that Ptolemy founded a library at Alexandria in the 3rd century B C which served as a shrine to inspire the spiritual and intellectual life of Greece. This famous library containing 700,000 manuscripts, many unobtainable elsewhere, perished when the ships anchored in the harbour were set to fire by Julius Caesar in the first century B C

1 Libraries in Ancient India

In India, unhappily, there are no records to throw light on the existence of libraries in the first few centuries of the Christian era comparable in magnitude to the Alexandrian library. However, Fahien, the intrepid Chinese pilgrim who spent six years in India collecting authentic Buddhist scriptures in the beginning of the 5th century A.D., refers in his Chronicle, *A record of the Buddhist kingdoms*, to a Jatavana monastery which was a chief place of Buddhist learning as having a library and reading room.

11 NALANDA UNIVERSITY LIBRARY

Hiuen Tsang, the other Chinese Buddhist monk who followed in the footsteps of his illustrious predecessor a couple of centuries later, sojourned in the Nalanda University and observed that monasteries were great seats of learning in India and had libraries which contained rare books. Likewise, I-tsing, the Chinese scholar who visited Nalanda thirty years after Hiuen Tsang, spent ten years there and in the splendid library attached to the University he got copied 400 Sanskrit works comprising 500,000 verses. It is interesting to learn that the library quarter was known as Dharma-Ganja (mart of knowledge) and three buildings housing the library as Ratnasagara (ocean of gems), Ratnodadhi (ocean of gems), and Ratnaranjaka (pleasing as gems or pleasing because it contained gems).

In the 9th century, the Nalanda University enjoyed international reputation

2 Libraries during the Muslim Period

During the Muslim period the growth and development of libraries received considerable encouragement Fortunately, paper came to be used as writing material in the 12th century and this gave a great fillip to book production in this period and the consequent enrichment of libraries The rulers themselves were great lovers of books and some of them even owned private collections Babar's daughter, Gul-Badan Begum, was one such It is well known that Humayun tumbled from the balcony of his library and 'tumbled out of life' Akbar had zealously built a great library and had a large number of Sanskrit and other books translated into Persian to equip it. His favourite pastime was to have books he loved read to him Aurangzeb added to the Imperial Library at Delhi many Muslim theological works This library, built up by the interest of many sovereigns through a long period of time, was carried away to Persia by Nadir Shah when he sacked Delhi in 1739 The loss naturally resulted in a great set-back to educational progress in the country

22 UNDER BAHAMANI

Mohammad Gawan, minister of Mohammad Shah (1463-1482) of the Bahamani Dynasty of the Deccan, built at Bidar a college which is said to have possessed a library of thousands of volumes

23 LIBRARY OF TIPU

After the fall of Seringapatam in 1799 and the death of Tipu Sultan, his property was sold by public auction for the benefit of the captors, but his valuable library was ordered to be preserved entire with the exception of a few manuscripts which were selected and sent to the Asiatic Society of Bengal and the Universities of Oxford and Cambridge Marquis Wellesley ordered that the library should be transferred to Fort William in Calcutta (1804) and attached to the College founded for the benefit of the junior civil servants of the East India Company to acquaint them with the sciences of 'the Asiatic Languages'

The library comprised nearly 2000 volumes of Arabic, Persian and Hindusthani manuscripts in all the various branches of Muslim literature Many of these were beautifully written and highly ornamented but a good portion were in bad condition and several with the first and last pages missing It is surmised that these volumes were part of the plunder brought by Hyder in his various expeditions

All of them were subsequently rebound at Seringapatam on the orders of Tipu The topics were either theology or sufism which interested the Sultan most It is said that the Sultan himself was very ambitious of being an author.

However, no work of his composition was discovered in the library There were in all 45 books on different subjects which were either composed or translated from other languages under his immediate patronage and direction

3 Saraswathi Mahal Library, Tanjore

The Maharaja Sarfoji II (1798-1833) was a great patron of learning and in his reign of 35 years the Saraswathi Mahal Library at Tanjore grew enormously in size and content This unique library of the South has a remarkable collection of about 30,433 palm leaf manuscripts as well as 6,426 printed volumes, besides a large number of journals Dr Burnell, who had catalogued the Sanskrit manuscripts which constitute the bulk of the collection was of the opinion that this unique library in India represented the result of three hundred years of collecting by the Nayak and Maharatta Raja dating from the end of the 16th century or the beginning of the 17th century Sarfoji himself made a valuable collection of Nagari manuscripts at Banaras in about 829 Besides Sanskrit manuscripts there are also those in other languages such as Tamil, Telugu, Malayalam, Kannada, Marathi (Modi Script) Grantha, Oriya, Urdu, Bengali, Punjabi, Kashmiri and Nandinagari, etc Happily a catalogue of these manuscripts was published, running into several volumes

4 Madras Literary Society

The library of the Madras Literary Society may be said to be the oldest in India having had a continuous record of service for very nearly one and half centuries It was established on March 27, 1818 though the Society was registered on October 25, 1887 under the Society's Registration Act of 1860

The Society is an auxiliary of the Royal Asiatic Society, London "Its work now is that of a circulating library", observes Glyn Barlow in his book, *Story of Madras* (1921) and adds "But in earlier times it was especially a 'literary society', and its meetings, at which lectures were delivered or papers were read and discussed, were crowded gatherings of the leading Europeans in the city The original Literary Society included scientific researches within its scope, and scientific members used to discuss learnedly on scientific subjects of topical interest, such as "The Land Crabs of Madras", or 'Prehistoric Tombs in the Salem District,' or 'Gold in the Wynaad of Malabar' The name of the Society remains, but the literary and scientific meetings are no more. The last lecture, if memory fails not, was delivered in the nineties, and the audience was not large enough or enthusiastic enough to denote that lectures were any longer in demand As a 'Literary Society and Auxiliary of the Royal Asiatic Society', the institution has outlived its requirement, but it has a valuable store of more than 50,000 books, new and old, on all subjects, and it is continually adding to the number, and, as a circulating library of a high standard, it fulfils an excellent literary purpose "The Society which was greatly interested in "the investigation of the mysteries of nature, promotion of the researches of science, advancement in the progress of literature and the knowledge of our fellowmen" edited and published the very valuable journal, *Madras journal of literature and science* which ran for a period of about 60 years from 1833-34 to 1894 and then ceased publication

In the *History of the city of Madras*, Prof C S Srinivasachari says that "the Madras Literary Society proposed to utilize the services of Kavali Venkata Lakshmiah, a pandit who was for 30 years in the service of Mackenzie for the extraction and publication of valuable information from the records " [Col Mackenzie (1753-1821), the great antiquarian and collector of rare manuscripts, was Surveyor General of Madras in the year 1815]

The Society has today 100,000 volumes in its holdings and is entirely self-supporting It receives no grant from the government and sustains itself from the subscriptions received from the members and subscribers The members pay Rs 15 and Class I subscribers Rs 6 and class II subscribers Rs 4 quarterly It is open for 12 hours a day

It maintains an excellent home delivery system for the benefit of the city residents to whom new books are delivered in their respective homes once a week without payment of any additional charges

The library is housed in sylvan surroundings between the Women's Christian College and the Offices of the Director of Public Instruction, on College Road, Nungambakam

5 **Madras Oriental Manuscripts Library**

The library, which is housed in the new University buildings on the Marina in Chepauk, ranks next in importance to the Saraswathi Mahal Library at Tanjore Valuable manuscripts in Tamil, Telugu, Malayalam, Kannada, Marathi, Sanskrit, Arabic, Persian and Urdu are treasured here

There are in all 7,240 Tamil, 4,693 Telugu, 513 Malayalam, 2,316 Kannada and 31,692 Sanskrit palmleaf manuscripts in this rich treasure house A part of the invaluable collections of Sir Colin Mackenzie popularly known as 'the Mackenzie Collections' constitute the nucleus and foundation collection of this library besides the Leyden collection of manuscripts discovered in the India Office Library by C P Brown, a member of the Indian Civil Service in 1837

These were preserved in the Madras College Library and transferred later to the custody of the Director of Public Instruction who had them all locked up in a godown under the care of an attender The Rev Foulkes of the Vepary Diocese drew the attention of the government on August 14, 1867 to the fact that these manuscripts were getting decayed for want of proper care. However on February 6, 1869, the Government constituted a committee to look after them Mr Pickford, a professor of Sanskrit at the Presidency College, Madras, was appointed by Government on March 15, 1869, as honorary librarian to take charge of them, and as a result, the collections were shifted to the Presidency College In the year 1895 they were moved into the Fort St George and again during the following year to the Madras Museum It was finally transferred to the present buildings from the Government museum in 1939

In 1873 the Government created the post of a part-time curator and made it full-time in 1942 From 1869 to 1948 ten curators had been in charge of this library and from 1948 the present curator Sri T Chandrasekharan has been administering it ably Under his care many valuable manuscripts have been published There is a good descriptive catalogue of the collections running into several volumes

6 **Connemara Public Library, Madras**

The Connemara Public Library began as a small museum library in the year 1860 owing to the efforts of a captain Jesse Mitchelwho was part-time superintendent of the museum between the year 1859 and 1872 The library was shifted to its present building during the time Dr Edgar Thurston was superintendent of the museum between 1885 and 1900. On 22nd March 1890 the foundation for the new building was laid by Lord Connemara, the then Governor of Madras, and was completed in September 1896 and formally opened on 5th December by Sir Arthur Havelock, Governor of Madras who succeeded Lord Connemara.

During the time when Dr Gravely was the superintendent of the museum and principal librarian of the library (1920-1940) the open access and the loan systems were introduced and were continued under Mr R Janardhanam Naidu, Librarian, who retired in 1950 In 1940, after a period of eight decades, the library was removed from the administrative control of the superintendents of the museum In 1948, consequent on the Madras Government enacting the Madras Libraries Act, this library became the State Central Library and was entitled to the receipt of copyright copies of books published in undivided Madras State Mr K Govinda Menon succeeded Mr R Janardhanam Naidu as Librarian, and in his regime the library was recognised as the National Public Library for the Southern region under the Delivery of Books Act of 1954, by which one copy of every book published in India is received As a consequence, a large number of books in all the languages of India including periodicals and newspapers arrive here daily thus creating the need for additional space in the 65 year old building to accommodate them In spite of the fact that in 1950 additional accommodation was provided in the existing building by putting up a wooden flooring and releasing the ground floor space for the stock room, the interior looks somewhat overcrowded During week-ends the library has a record of number of visitors and the borrowings are heavy

A children's library in the compound of the office of the Director of Public

Instruction, Madras, the first of its kind in India, started functioning from 22nd November 1950 To start with, the library possessed 587 volumes of which 423 were in English, 93 in Tamil, 21 in Telugu and 20 in Kannada A playground is also attached to it and both the library and the playground are generally very popular among the juveniles

7 Adyar Library

"The Adyar Library is indeed a Temple of All faiths, as its founder intended it, since within it rests the texts and pictures of those great religious teachers most worshipped throughout the world "

Col Henry Steele Olcott, the great man who worked for the revival of Oriental learning from 1879 until his passing in 1907 was the founder of this library (and also president-founder of the Theosophical Society) The library opened on December 28, 1886, holds 60,000 volumes and 15,000 manuscripts, 10,000 bundles of palmleaf manuscripts and 5,000 paper manuscripts in various languages such as Grantha, Tamil, Malayalam, Kannada, Telugu, Oriya, Bengalee, Nepalese and Devanagari

The collections in archaeology, art, history, philosophy and religion are considered as veritable treasures in this library

There is a children's corner with mats and suitable literature which is a source of attraction to the juvenile readers

The library has published a catalogue of the manuscripts and a descriptive catalogue Many books have also been published from time to time from here and the process is continuing It is running a Bulletin which is one of the foremost Oriental periodicals in the world

This library has an exquisite natural setting on the bank of the river Adyar which enables it to enjoy an atmosphere of peace and tranquillity so much welcome for study and contemplation

8 National Library, Calcutta

There was a public library in Calcutta, which was the object of great patronage, in the hands of Sir Charles Metcalfe who officiated as Governor-General of India in 1835-36 during the interval between the departure of Lord William Bentinck and the arrival of Lord Auckland From the house of Dr Strong, where it had functioned for several years, it was shifted to the Fort William College building in 1841 and finally removed to the Metcalfe Hall in June 1844.

When Lord Curzon visited the library sometime in 1899 he found it in a dismal condition, tenanted by pigeons, and the books on shelves torn and hanging loose in their bindings, with a few readers reading either light fiction or newspapers This experience had a rather disquieting effect upon him Then at about the same time, when he visited the Home Department, he found there stacked in a crowded and unsuitable building, the large library of books belonging to the Government of India and known as the Imperial Library useless for purposes of local study and unknown to the public at large

The idea of amalgamating these two libraries and giving to Calcutta, then the Capital of the British Empire in India a library worthy of the name, took shape in his mind Immediately, Metcalfe Hall was renovated and refurnished and all the old books contained in it examined, weeded out and rearranged with those transferred from the Home Department The services of a new librarian from England, by the name of J Mcfarlane, were also secured The amalgamation resulted in the Imperial Library being born with a total stock of nearly 100,000 volumes Lord Curzon, on the occasion of the opening of the new library in January 1903, observed in the course of his speech "We are introducing our child, I hope a robust as well as a learned child, to the Calcutta Public and inviting them to take notice of her and patronise her, now that she has made her bow to the world "

This library is fortunate in having at its helm today Mr B S Kesavan owing to whose indefatigable energy and efforts the historic government house building 'Belvedere' was secured for housing it when the need became imperative to shift it from the old Metcalfe Hall Under the Delivery of Books Act of 1954 this library has been recognised as the National Library for the Eastern region

91 **Delhi Public Library**

This library was founded in 1950 as a joint Government of India and UNESCO Pilot Project and opened by the Prime Minister in October 1951 It has a stock of 62,690 volumes in three languages, English, Hindi and Urdu and receives 13 newspapers and 68 periodicals A childrens' library is attached to it with facilities to borrow or read on the premises It has also an active social education department which organises or supervises film shows, discussion groups, dramatic performances, etc A mobile library service was instituted in 1953 and a modern van with a capacity for holding over 2000 volumes was pressed into service The van now touches seven points in rural areas and eight in urban, the farthest rural point reached being 19 miles and the urban point 10 miles away from the central library

Recently, the Prime Minister presented to this library about 400 volumes from his personal collections The books were on varied subjects and included 293 in English, 90 in Hindi and 15 in Urdu

92 **University Libraries**

All the universities in India have libraries attached to them, and the oldest of them at Calcutta, Madras and Bombay, who have recently celebrated their centenaries, have excellent libraries.

93 Donation of Dr Ranganathan

It may not be out of place here to mention that Dr S R Ranganathan, the Melvil Dewey of India, who had dedicated his life to the promotion of library consciousness in this country, donated his life's savings of Rs 100,000 for a Chair in Library Science at the University of Madras The announcement of this generous donation was made during the centenary celebrations of the University

The Chair has since been instituted and from the beginning of this academic year one professor and three lecturers belonging to this department will be actively engaged in imparting courses to the first batch of students who will be qualified for the degree in library science next year

94 Great Teacher

Dr Ranganathan who is a dominant figure in the Indian and world library science for well over three decades and a half now, founded India's first library school in Madras in 1929 and trained yearly batches of students first for the Certificate Course in Library Science and later for Diploma Course in Library Science Many universities were quick to copy the example set by Madras and soon many library schools grew throughout the country The University of Delhi under the inspiration of Dr Ranganathan instituted the first degree course in library science in India leading to a Master's degree There is also facility here for research leading to a Doctorate degree Precedent for this, it is learnt, is found only in the United States

It is only fitting that one who began the first elementary course in library science has ended up by providing for the highest academic degree

95 A Wish for Future

There is yet one unfulfilled wish in the mind of Dr Ranganathan and that is to establish a training college for teachers of librarianship He had already produced the reading material in the shape of books and the institution must take shape

It is fervently hoped that this wish will materialise in his life time

CHAPTER L2

Indian Librarianship and Dr Ranganathan

V S Rastogi

0 Libraries in the Past

The history and growth of the library movement in India is hardly half a century old. It is only after the dawn of independence that India experienced a revolution in the field of education and along with it came a change in the public and government attitude towards libraries. It began to be realised that libraries formed an important link in furtherance of education and research and that they are a vital source of self education through recreation. They can stand quite independent of others. Formerly the library was always taken as a subordinate part of some educational institution or of some government department and it was housed in some off and dingy corner of the building of the mother institution, which the authorities considered, could not be placed to some other useful purpose. The condition of librarians manning these libraries was no better than their bread earners. Barring a few at the top, majority of them were employed as part time librarians and for the major part of their duty hours they were put at office and other miscellaneous duties which had little or practically no concern with the library work. Still great tragedy was that these librarians themselves did not know the real meaning of the library, its service and functions. To call them librarians was really a misnomer and an insult to the word 'Librarian'.

1 Libraries Today

The idea of establishing public libraries for the public good is purely Western, and the spread of public library movement in India is the result of the impact of Western culture and thought on us. The Britishers though so very enthusiastic of establishing public libraries in their own country, did not find favour with the idea of establishing public libraries for the public good in India. From amongst Indians they wanted clerks to man the subordinate services of their administrative machinery and not the thinkers and leaders to point out their misdoings.

The result of this apathy towards public libraries by the Britishers proved detrimental to our society. The common man of India remained quite ignorant of the potential values and benefits of the services of a public library and the librarians Till very recently people have failed to recognise librarianship as a profession Even today the conception of the word 'Librarian' is very vague in the mind of the common man It is that of a half aged man sitting behind the counter with glasses on, scantily paid, hardly to make his both ends meet, whose sole work is to make certain entries in a register, when a stray reader happens to come to the library. To the general concept the library is not a growing organism It is a stagnant pool what a philanthropist of past bequethed, out of his own inner urge of public good and according to this concept the librarian is one who is there to guard the treasure so acquired and the best is he who neither has shown nor will show the loss of a single book The average man finds no difference between the Librarian of a national library, a university, a college, a school or of a public library. To him all sound the same Even to our educated class there is little difference between a librarian and a library clerk One feels astonished when he is told that some fifty to sixty persons work in a particular library He is at his wits end to guess what work at all do they all do in the library About the public conception regarding the emoluments in the profession the little said the better Though many hurdles we have crossed yet much remains to be done to achieve its due place in the society and to bring it at par with other recognised profession of the day *e g* the physician, the engineer, the lawyer or the professor

2 **Whose Responsibility ?**

The question why this sad state of affairs prevailed and who were really responsible for it, strikes a young librarian, aspirant of success in the profession Answer is not far to seek A close analysis of the problem reveals that partly the public partly then the government and to some extent the persons then serving the profession in general were responsible for it

21 PUBLIC RESPONSIBILITY

Up to the end of the Second World War, persons governing the Indian libraries thought that any one who was a bit acquainted with the three R's and could effectively take guard and maintain a proper record of the library stock was good to be a librarian There was no need of higher educational attainments or of any specialised knowledge of the techniques of library service Such men were not hard to find and we cannot blame the then authorities for offering them scanty emoluments They were paid their due The neglect of libraries as a source of self education, scanty emoluments and clerical status attached to the profession on the part of the public failed to attract the brilliant persons and the intelligentia of the society of librarianship as a profession It became an asylum for the third rate men who failed to get a job elsewhere or were rejected from other departments as incompetents

22 Government Responsibility

The British Government did not pay proper attention towards the development of libraries in the country Few libraries received Government subsidy and that too was so meager that it was insufficient to run the existing libraries properly No incentive for research and higher attainments in the field of knowledge was given by the Government The system of education was such that it depended little on extra-reading from library Mere textbook study was considered sufficient to achieve an university degree Indians had little chances to rise to the top positions in the Government Hence the persons in service possessed little or no incentive for higher learning or of specialisation in their own field of work Little attention was paid towards the spread of technical and specialised education on the part of the Government Thus the maintenance of libraries was considered a luxury and not a necessity

23 Professional Responsibility

Those so called librarians did not enter the profession because they liked it or had a taste and aptitude for it but as they needed a job to earn their bread Ill equipped as they were with the library techniques, with the general education, and with their own field of works, they failed to give proper library service to their clientele The readers were left to their fate to search out their piece of information in the vast ocean of knowledge The then librarian failed to become the right link between the book and the reader, between the piece of information and its inquirer and thus could not command respect at the hands of the public coming to the library to quench their thirst for knowledge Thus the prestige of the profession as a whole went down at the hands of these immatures

24 A Tragedy

The results of letting the things to drift in this unnatural way proved ruinous to the profession Among these immatures and opportunists, it was difficult to find leaders of real worth to the profession Obviously, to fill the vacuum persons of allied fields *viz* education became our masters and thus was born the tragedy. Librarians began to be guided by non-librarians There dawned the era of Honorary Librarians, Professors-in-charge of the library and the Library Superintendents How this new superflous office has affected the profession, is no secret to any librarian worth the name.

3 Avtara Appears

Lord Krishna in the *Gita* says·

yadā-yadā hi dharmasya
glānir bhavati bhārata

abhyutthānam adharmasya
tadā 'tmānam srjāmy aham

At this dark hour when the clouds of dismay were looming large over the profession *Padmashri* Dr Shiyali Ramamrita Ranganathan came as an *Avtara* to rescue the falling prestige of librarianship as a profession, to give it an independent cadre and recognition in the eyes of the public and the Government. Modern day library science owes much to his dynamic genius Mr R S Parkhi, an ardent admirer of Dr Ranganathan wrote, "During his exceptionally brilliant carreer of about 33 years (1924-1957) in the library profession, he has made Bharat known to the outside world as a land in which library science is astonishingly well cultivated on account of his outstanding contributions on its various branches That there is a science of libraries was unimaginable to our people before 1931 Even in the leading Western countries the term 'Library Science' does not appear to have been used before that year It was the term 'Librarianship' that was generally known to mean all about the techniques of library management In these circumstances, it was indeed a flash light on the world of library profession when in 1931, he brought his most powerful, stimulating and instructive 'Five laws of library science' It is the root of his varied and illuminating contributions "[1]

31 Colon Classification

In 1925, he prepared the first outline and in 1933 he published the first edition of his famous scheme—the *Colon classification* Since then it has undergone many revisions and re-revisions It put Dr Ranganathan in the rank of world masters of classification

Reviewing the sixth, the latest edition of the Colon Classification a reviewer wrote "It has revolutionised thinking in the field of classification and has stimulated research in it This scheme is suited to small and large general and special libraries and can be used in classifying whole books as well as individual articles in a periodical or sections in a book It is being taught in all schools of library science all over the world not only as a means of arranging books on shelves but also as a means of finding out the focus of a book in a systematic way and finding the requirements of a reader while doing reference service The new methodologies in classification invented as a part of the Colon Classification—the Facet analysis, the Phase analysis and the Zone analysis—the various devices—the Bias device, the Subject device, the Classic device and the Octave device—have lifted practical classification from mere guess work to scientific method They are forming an important theme in international conferences on information retrieval".[2] A young Colon enthusiast elucidating the values of C C in the field of classification goes so far to say, "Present day classification and its notation has plunged into the areas where the classificationist like Melvil Dewey, Bliss and Sayers would have feared to tread" [3]

32 Other Works on Classification

Besides this famous scheme of classification, Dr Ranganathan has produced useful works like, 1 *Prolegomena to library classification*, 2 *Library classification Fundamentals and procedure*, 3 *Classification and communication*, 4 *Depth classification* and a host of others and a large number of research articles on classification Now he has reached such a stage that he is considered to be a Master Mind of the science of classification and documentation problems His articles in the *Annals of library science* on this subject stand testimony to his unique contribution to the subject These articles have helped a good deal to solve many difficult problems of depth classification

33 Contributions to Library Science

Dr Ranganathan has left no branch of library science untread and has produced illuminating works on Cataloguing, Reference Service, Bibliography, Documentation, Library Legislation, Library Administration, and a multitude of articles on the current problems of librarianship His special contribution to cataloguing is the *Classified catalogue code* and the most ingenious device of the Chain Procedure for Subject Headings The Facet formula technique of the C C and the Chain Indexing Procedure of the *Classified catalogue code* so well impressed Mr A J Wells, the learned editor of the *British National Bibliography* and an eminent British Librarian, that he introduced these techniques in the *British National Bibliography* In an article "Our Debt to India", Mr Wells remarks, "Indian readers will see from the *BNB* how much we owe to the work of Ranganathan His theory of classification is at the very heart of the Britain's newest undertaking in the field of librarianship We of the *BNB* are pleased to acknowledge our debt to India and in particular to Dr Ranganathan by whose work and inspiring friendship we have progressed to a new conception of the Classified Catalogue "[4]

34 Karma Yogi

Unlike an ascetic sitting aloof in a lone corner and trying for the enlightenment and upliftment of the self only, Dr Ranganathan is a *Karma Yogi* in the true sense of the word He loves people and loves the profession As early as 1928, he realised that for a proper development of libraries in India, the services of properly trained librarians is a must To achieve this aim, he started a school of library science at Madras His services as a teacher of library science first at Madras, then at Banaras and lately at Delhi and Ujjain are so great that we bow our heads in reverence It is to his genius and to his researches in the subject that library science has attained the status of a separate subject of study at the university level, and that in it perfection can be attained upto the highest degree a university can award. His fame as an able teacher and as an able guide attracted students from far flung corners of the country and even from abroad It brought a young handsome lad from the beautiful valley of Kashmir on a pilgrimage to distant Madras in 1945 When he found to his dismay that the author of C C had left it, he trecked the path to Banaras, to learn at the feet of the Master Mind.[5]

35 MAGNIFICENT DONATION

To crown all, camei n 1957 his magnificent donation of a hundred thousand rupees from his savings to the Madras University Library to establish "Sarda Ranganathan Chair in Library Science" an unparallel example in the history of the library world Addressing a letter to the Vice-Chancellor of the Madras University, he wrote, "We wish to endow it (a lakh of rupees) for the promotion of advanced studies and research in library science—a subject that has made life worth living with good cheer in spite of all the vicissitudes incidental to life in society" [6] A noble cause gives birth to another Following the foot steps of his master, Mr K Mahalingam, a former steno of Dr Ranganathan at Delhi University, donated a sum of Rs 4,000 to the Delhi University on 2, April 1959 for instituting a Gold Medal in Library Science [7]

4 Change in Government's Outlook

The indefatigable efforts of this *Karma Yogi* started a chain reaction and in turn gave several stalwarts to the profession Thanks to the untiring efforts of these leaders of the profession that the library movement has taken a firm root in Indian soil and is now well on its way to progress The proverb 'God helps those who help themselves' proved true With the dawn of Independence and the establishment of a national Welfare State at the centre, came a change in the Government's and the public view as to how a library is expected to function A library now no longer remained a place for the protection and preservation of books for a few, but it is a store house of knowledge guiding and inspiring many The leaders commanding the reins of the Government realised that any amount spent on elementary education is a sheer waste, provided it is not supplemented by proper library facilities In its absence many neo-literates relapse into illiteracy Late Maulana Abul Kalam Azad, former Education Minister of India once remarked, "The vast majority of them (children and neo-literates) give up their studies before literacy has been permanently established. This is also one reason why in spite of the fact that some 40% of the children of school age attend basic and other primary schools the percentage of literacy for adult population is so low [8] Government interest in furtherance of library movement proved a boon to the profession With the advancement of education in the country, there opened many new universities, colleges, educational institutions, research laboratories, scientific organizations, research councils, academies and various schools of specialised fields of research which all in turn depended on efficient library service Thus increased the employment potential of the professional and semi-professional librarians and a host of non-professionals It in turn gave rise to the rank and file within the profession To cope with the increasing demand of the trained librarians, various universities stood up to the occasion and started certificate and degree courses in Library Science

41 NEW EXPERIMENT IN PUBLIC LIBRARIES

A new experiment in the field of public libraries was made with the establishment of Delhi Public Library with joint enterprise of the Unesco and the Government of India At its inauguration in October 1951, Late Maulana Azad said, “A library service is necessary not only for adult neo-literates but also for the children who complete their basic education The Delhi Public Library will be a free public library and open to all members of the community without distinction of race, religion, class or occupation ”[9] The experiment proved a success beyond expectation Now this library with its standing of some ten years, has acquired a collection of 166,371 volumes, a standing membership of 44,000 on its rolls and issues at an average 2,000 books per day for home reading It has mobile vans to give service to the far flung urban and rural areas of the cosmopolitan city of Delhi [10] It has achieved an enviable position and has become an indispensable part of the life of the Delhi people

42 NATIONAL BOOK TRUST

Our national leaders realised that to inculcate the habit of reading and to create a library interest amongst the common mass of our country, it is essential to make available good books at cheap rates within the reach of every one With this aim in view, on 1 August 1957, Dr S Radhakrishnan the then Vice-President of India, inaugurated the National Book Trust with Dr C D Deshmukh as the Chairman of the Trust Explaining the aims and objects of the Trust, Prime Minister Mr Nehru remarked, “It is not to invade the domain of private publishers but to make available books recognised to be good at a low cost and to create a climate for book reading and book buying among the vast numbers of people in the country The whole object of the trust apart from its larger aspects is to help the writers and even the publishers not directly but by creating an atmosphere in which they could flourish much better than they have done Unless and untill we could supply books at cheaper prices the reading public can never be widened ”[11]

43 PROVISION IN THE FIVE YEAR PLANS

The happy augury for the profession is that the advancement of Library

Service Programme has found a place in the Five Year Plans of our country. Due provision was kept in the First and the Second Five Year Plans for the expansion of National Library, Calcutta, for the establishment of a Central Reference Library at Delhi and Central State Libraries in the States In 1954, Indian Parliament passed Delivery of Books and News Papers Act which made obligatory for every Indian Publisher to send four copies of his each publication to the four national depositories Under the guidance of Mr B S Kesvan, a band of qualified librarians was entrusted with the work of compiling the *Indian National Bibliography*, an experiment and an effort first of its kind in the history of the country Its first cumulative volume came out in 1958 To compile a National Bibliography of India with its multiplicity of languages and script was a formidable task peculiar in nature of its own in the history of the National Bibliographies of the world Passage of time has proved beyond doubt that we have gained success in the project To facilitate the private individuals and smaller organisations, the Government of India decided to bring out the language fascicules of the Bibliography in the script of the State concerned with the co-operation of the State Governments Accordingly the Bengali, Hindi, Urdu, Kannada, Malayalam and other language bibliographies have been published.[12]

44 Scientific Documentation

With the technical assistance from Unesco, the Government of India instituted INSDOC in 1952 with its headquarters at the National Physical Laboratory, Delhi, with the aim of furthering research in scientific subjects Introducing its objects, Mr K D Malaviya the then Deputy Minister for National Resources and Scientific Research wrote, "Insdoc offers a major service to Indian scientists and scientific institutions in publishing the *Insdoc list of current scientific literature* The aim of this Insdoc List is to inform Indian scientists of the latest papers published in over 250 scientific and technical journals of the world as rapidly as possible Incidentally, it may also be mentioned that the Insdoc List will also serve to inform scientists abroad of the latest Indian work [13] It endeavours to procure any scientific or technical paper and to provide a copy of it It also undertakes the service of translating scientific or technical papers from any of the leading scientific languages to English

45 Future Library Structure

In October 1957, the Ministry of Education, Government of India appointed a Library Advisory Committee under the chairmanship of Mr K P Sinha to enquire into the present reading needs of the people and to recommend a future library structure for the country. The Committee toured the whole country and made personal interviews with the prominent librarians In about a year's time, it submitted its report It suggested a 25-year library plan to raise the library structure from its present embryonic stage to size which will do justice to the cultural and educational needs of the people It recommended a net work of libraries to be spread throughout the length and breadth of the country and a National Library, a State Library, a district library and the village library to form the links of the library grid of the country It further suggested that the State librarian should be of the rank of the D D E and that the cadre and emoluments of a district librarian should be at par with that of a P C S gazetted officer. The Committee felt that certain practices which adversely affect the moral of librarians should be abolished One of such practices is the demand for security from a librarian and to penalise him for loss of books Such practices, it said, are inquitous and unheard of in the library practice of any advanced country in the world [14]

46 LIBRARY EDUCATION

In 1957, Mr K G Saiyidain, Secretary to the Ministry of Education announced the decision of the Central Government of India to start a Central Institute of Library Science at Delhi with the following aims

1 To organise course for training district and state librarians,
2 To organise courses such as refresher courses for certificate in librarianship, courses for children's libraries, for school librarians, courses in the use of special library materials,
3 To conduct research in librarianship, and
4 To produce teaching material for library training courses [15]

47 UNIVERSITY LIBRARIES

The University Grants Commission with the assistance of Dr S R Ranganlathan also played its part well in the promotion of university and college ibraries It provided handsome grants to erect magnificient and purposeful library structures, to enrich their existing book stock, to pay better emoluments and to provide better service conditions to their staff In March 1959, the Commission conducted a Seminar of University Librarians at Vigyan Bhavan, New Delhi under the Chairmanship of Dr S R Ranganathan to discuss the 'Work-flow' system and other problems of the university libraries The results of the discussions at this seminar proved encouraging. The U G C in principle accepted the rank and grade of the University Librarian, the Deputy Librarian and the Assistant Librarian equivalent to that of a professor, a Reader and a Lecturer respectively This greatly enhanced the prestige of librarians and now it has become an everyday phenomenon to read advertisements for qualified librarians in handsome grades

5 Keen Competition

The new vistas now opened to the profession, due prestige paid to it and handsome salaries offered to librarians, the profession has begun to attract young men of the country The huge rush and the keen competition at the time of admission at all the existing schools of library science in the country bears a testimony to the rising interest of the educated mass of India in librarianship and that its future is bright

51 Fellowships and Grants

In the wake of international co-operation, friendship, foreign scholarships, grants and exchange of students in the varied fields of study in humanities and sciences, Indian librarians did not lack behind to persons in other professions They, in groups and in individual capacities visited foreign countries—U S A, U K, France, Germany, etc—under different projects sponsered by the Indian and foreign governments Among these, special mention may be made of the U S Wheat Loan Exchange Programme, Smith Mundt and Fulbright Scholarships, UNECAF (United Nations Educational Cultural Association Fellowships) and U S Educational Foundation in India Scholarships The work and standard of the Indian Librarians received appreciation in foreign countries In 1948, Dr Ranganathan took a multipurpose trip to Europe and the United States of America His participation in various conferences, committees and association meetings greatly enhanced the prestige of Indian librarianship in foreign eyes [16] Now it has become a common phenomenon to see Indian librarians receiving foreign scholarships and government grants for higher studies and research in library science and going abroad Recently the sponsors of the Fulbright scholarships announced a lump sum grant worth two lakh dollars to the Delhi University for advanced studies in library science

6 Recognition and Awards

Real work is a worth in itself and begs for no commendation Recognising the merits of Dr Ranganathan's works and his services to the profession, on 7 March 1948, Lord Mountbatten, (Former Governor General of India) as the Chancellor of the Delhi University conferred upon him at a special convocation the D Litt degree Honorary Causa In 1957, Government of India honoured him with the high title of *Padmashri.* Later on the services of Mr B S Kesvan as the Librarian of National Library, Calcutta were hailed by the Government of India and he too was honoured with the title of *Padmashri* It is no less a pride to the library profession to see two of its members to be honoured by the President of India Delhi University at its convocation held in December 1960, awarded the Narsinghdas Agrawala Prize to Mr

Subodh Kumar Mukherjee, Deputy Librarian, Calcutta University for his book *Granthagar vigyana* adjudged to be the best book in science subjects in Bengali during the years 1957-60 [17]

7 Library Conferences and Seminars

The Government's patronage brought strength to the physical side of the profession and simultaneously librarians themselves made efforts to make it equally strong internally They formed the Indian Library Association, associations of librarians at state level and at district level They sat together and discussed together the common problems of the profession and the ways to put it on a way to progress Among these, the occasional conferences of the I L A (formerly biennial), the Unesco Seminar on 'The Role of Public Libraries in Social Education' and the seminar on the 'Development of Public Libraries in South Asia' held at Delhi in 1955, the Unesco seminar on the 'Library Development in South Asia' held in 1960 are worth mentioning The I L A, no doubt did commendable work in the early years of its formation but it could not achieve the enviable position of its American and British counterparts, the A L A and the B L A With the passage of time, it is feared, it may not tend to the position of spent bullet

8 Library Periodicals

The contributions of the periodicals like the *Indian librarian*, the *Abgila*, the *Annals of library science*, the *library herald*, the recently started the *Herald of library science* and others are also great in promoting the cause of the profession in and outside India

91 Library Law

We have crossed the age of infancy and we have well borne the test of time The untiring labours of the pillars of the profession have put us on a sound footing, away from the dangers of being blown off We are at the verge of passing a library law in all the States in the country and we foresee a vast scope for future progress not only for our existing brethren but also for those who will come after us and join hands with us

92 A Prayer

At this auspicious juncture of the 71st birthday of the 'Father of Library Movement in India' and the 'Master-mind of library science' we pray to the Almighty to bestow on him a long life, so that he may be with us and guide us for many generations to come and take us—the Indian librarians—to the pinnacle of glory.

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CHAPTER L3

Dr Ranganathan and Madhya Pradesh

V S MOGHE

0 Library Conference

It was April 1942, the Second World War was going on. India too was in ferment. The people were awaiting the signal from the Father of the Nation and other leaders to plunge into the final struggle for independence. The Fifth All India Library Conference was held in Bombay in this tense atmosphere. I attended it as a delegate from the Indore General Library. Nine years later this very library was to be the host to the IX All India Library Conference.

01 RANGANATHAN AT THE CONFERENCE

The delegates and invitees met in the University Convocation Hall for the inauguration of the Conference. Before the proceedings began, most of the delegates were seen making this inquiry, "Has Rao Sahib come ?" I was almost a stranger and hardly knew any one. I did not know Rao Sahib Ranganathan too, as he was then known. Soon he came to the conference along with the President and other dignitaries and occupied a seat on the dias. I had the first *darshan* of my revered *Guru.*

02 INITIATION TO LIBRARY SCIENCE

The Conference began and ended in the usual fashion. If I remember right, the delegates were introduced to Rao Sahib—rather he came to every one of us—in an informal way at the social functions arranged on the occassion. But my memory is still afresh with his inspiring lecture delivered at the Mumbai Marathi Grantha Sangrahalaya. It kindled in me a desire to know something of library science of which I did not know any thing till then.

1 Contacts

Since the Bombay Conference, I had several opportunities of meeting Dr Ranganathan. Our contacts grew with time. In a way this personal contact might be linked up with Dr Ranganathan's first indirect association with the

State of Madhya Pradesh Of course, he had already thrust his way in a more subtle manner through his thought provoking books in some of the libraries of Madhya Pradesh. Yet a personal touch from the Master was needed to inspire them

2 Spell of Nagpur Conference

This happened in 1949 when Dr Ranganathan presided over the Eighth All India Library Conference held at Nagpur, the capital of the old Madhya Pradesh I am sure everyone present there knows very well that the Nagpur Session was a remarkable success mainly due to the personal efforts of Dr Ranganathan Not only did he guide the proceedings but also went from door to door to collect funds for the Conference I refer to this association because the major portion of old Madhya Pradesh which represented at that Conference has now come under the new State of Madhya Pradesh. The delegates returned to their libraries firmly convinced with the solemn and prophetic declaration that Independent India needed vitally an adequate and properly organised library service for her progress and prosperity.

3 Madhya Bharat Library Conference

The next occassion was the Golden Jubilee of the Madhava Pustakalaya of Gwalior held in 1950 Along with it was held the 1st Madhya Bharat Library Conference I was not able to attend it but I am convinced that the old Madhya Bharat Library Association was formed at the instance of Dr Ranganathan Its constitution was drafted by him This was the first occassion when the librarians from the various parts of the old Madhya Bharat which constituted mostly of the Princely States met together and discussed common problems They had the benefit of the expert guidance and sound advice from one who has been hailed as the 'Father of Library Science'.

4 Indore Conference

It is no exaggeration to say that the lead given by Dr Ranganathan at Gwalior to the Library Movement in Madhya Bharat was quickly followed by holding the IX All India Library Conference and 2nd Madhya Bharat Library Conference at Indore in the very next year *i e* 1951 I happened to be the Secretary of the Reception Committee, and therefore, came in close contact with Dr Ranganathan who was the President of the Indian Library Association. Indore has also the proud distinction to hold simultaneously the First Conference of Asian Librarians at the initiative of Dr Ranganathan This conference led to the creation of AFLA (Asian Federation of Library Associations).

41 AWAKENING OF LIBRARIES

These two events led to an awakening of libraries in old Madhya Bharat and discarding of old and outmoded motions about their working A new concept of service was brought to the notice of the library authorities The positive role of the libraries in the society came to be recognised and the Government too was seized of the problem of improving the existing pattern and conditions of the libraries The need of having trained personnel to conduct the affairs of the library also came to the forefront As a result, the Government of Madhya Bharat deputed three trainees to take training in Library Science at the University of Delhi during 1951 to 1953 I was one of them Another trainee was Mr S S Sharma who stood first in the Diploma Examination of 1953, and now is one of my collegues in teaching to the students of the Certificate Course in Library Science We both consider the period of our training at the feet of Dr Ranganathan as a turning event in our lives

5 Madhya Pradesh Library Conference

For a while, the library movement in Madhya Bharat seemed to be on the wane and lost in the turmoil of the political transformation leading to the creation of the new State of Madhya Pradesh comprising of Madhya Bharat, Mahakoshal Area of old Madhya Pradesh, Vindhya Pradesh and Bhopal State The Vikram University was established at Ujjain and a Diploma Course in Library Science was instituted there It was a happy augury for the librarians of Madhya Pradesh to find Dr Ranganathan at Ujjain as a Visiting Professor They seized this golden opportunity and invited Dr Ranganathan to preside over the 1st Madhya Pradesh Library Conference held in Bhopal at the end of 1957 Dr Ranganathan, ever willing to help a noble cause which is so dear to his heart, obliged in spite of his ill health, and helped in promoting Madhya Pradesh Library Association It was at his instance and pursuation, I think, that the Governor of the State, Mr H V Pataskar, agreed to be the President of the Association

51 M P LIBRARY ASSOCIATION

Thus one finds today in the new State of Madhya Pradesh, a Library Association with the Governor as its President, functioning It is too early to assess its work which is bound to be slow and difficult owing to the vastness of the State and limited resources of the Association Yet it cannot be denied that it is striving without any fan-fare to promote reading habit and library consciousness amongst the people

6 Libraries in Madhya Pradesh

There are five Government Central Libraries in the State of Madhya Pradesh at Bhopal, Jabalpur, Gwalior, Rewa and Indore The Central Library at Indore has been recently established, and has also received a benevolent grant from His Highness the Maharaja Holkar While the oldest Public library in the State is the Indore General Library founded in 1854, the biggest public library is the Central Library of Gwalior The latter also maintains a Children's Library-cum-Museum, the first of its kind in the State, having been opened in 1959 Due provision is made in the Third Five Year Plan to develop these Central Libraries The Development of the Maulana Azad Central Library at Bhopal (renamed after the illustrious leader and patriot, Late Maulana Abdul Kalam Azad, to perpetuate his memory) as a State Central Library is also under the active consideration of the Government A Committee was appointed to suggest the lines of development and improvement of this library and its report has been published

Besides these five Central Libraries which are located in the major cities of the State, there are 24 District Libraries, 2 Integrated Libraries, and 1 Mobile Library functioning in the State There is a plan to cover the remaining 19 districts by establishing District Libraries All these Libraries are looked after by the Education Department which also gives liberal grants to private, public libraries in the State The Rural Library Movement is carried on by the Social Welfare Department through the Panchayats and Janapad Sabhas The need of having trained personnel for the proper working of the libraries has also been realised and a Certificate Course in Library Science is conducted at the Central Library, Gwalior since 1957 The prospectus and syllabus of the said Course was prepared by me with the active help and guidance of Dr Ranganathan The Course got off to a flying start with his blessings when he came to Gwalior in March, 1958 and addressed the first batch of trainees In subsequent years too, most of the trainees had the good opportunity of meeting him in Delhi whenever he came there In last March 1961, he addressed the students at the Gwalior Aerodrome This shows his love and interest in the younger generation of would-be librarians

7 Blessings of Ranganathan

All this development and improvement can be, I firmly believe, indirectly or directly attributed to Dr Ranganathan Whether it was in his personal capacity or in the capacity of the President of the Indian Library Association, has got little significance I know from my personal experience that he is ever willing to help any one who has at heart the spirit of service which is the essence of our library profession He loves work and does not want himself or others to fritter away their time and energy on unproductive matters. He is a hard taskmaster, yet humane and affectionate

8 Dedicated Life

The events narrated above bear ample evidence of Dr Ranganathan's keen and deep interest in library movement, his true love and devotion to library science, and above all, his persistent efforts to raise the library profession in every part of the country He has dedicated his life to the noble cause of serving the humanity through a branch of knowledge so far unexplored and yet most powerful His life is a noble example, to us who are his disciples to follow and lead May I, on my own behalf and on behalf of the brother librarians of the Madhya Pradesh, express our deep gratitude and offer our humble respects to our revered *Guru*, Dr Ranganathan, on this occasion and pray for his long and happy life to guide and lead us for many many years to come.

CHAPTER L4

Contribution of the Punjab to the Indian Library Movement

SANT RAM BHATIA

1 Punjab Library Movement

THE Library Movement in the Punjab dates from the selection in 1915 of the late Asa Don Dickinson of Pennsylvania University to reorganise the Punjab University Library, Lahore, on scientific lines. Mr Dickinson, who was in the Punjab for about a year did a notable piece of work. He introduced the Dewey Decimal Classification and the Open Access shelf system in the University Library and set a model which college libraries have eagerly followed. He trained librarians and instilled in them the idea that they were to become not only custodians of books but also friends and guides of those using their libraries. He gave the librarian a new standing and a greater respect for his work and showed him that in his work, imagination, scholarly habits, tact, and many other forms of the highest wisdom were essential. He wrote the first book on library science, *Punjab library primer* which was published by the Punjab University. Through this book, interest in library science grew among library workers and those interested in the development of libraries in the country.

2 Shade and Sunshine

After his departure, the movement collapsed into what might well be described as a "defunct enthusiasm", and it remained moribund until October 1929 when some librarians in Lahore were inspired to form the Librarians Club. This small organization, admirable and daring, took upon itself the heavy responsibility of holding the 7th Session of the All-India Public Library Conference in December 1929. The Conference was presided over by the late Sir P C Ray and proved a great success and the Punjab Library Association came to life again, organised a number of Punjab Library Conferences and Book Festivals and launched on a substantial and creditable work of publishing the *Modern librarian* as the official organ to render valuable services to the cause of the profession by promoting library movement. The late Dr Sir A C Woolner, the late Sir Manohar Lal, the late Sir Abdul Qadir, the late Mr R C Manchanda, the late Mr Labhu Ram, the late K B K M Asadullah, Dr F Mowbray Velte, Rev Dr E D Lucas, Sardar Sohan Singh, Mr A R Talwar, Mr V P Varma and the late Mr Ram Labhaya will always be remembered for their selfless work in the cause of libraries

3 The Modern Librarian

31 SPECIAL NUMBERS

The *Modern librarian* completed fifteen volumes of considerable value The special numbers were published as under

1 Punjab Library Association, First Conference Number, March and April 1931
2 Punjab Library Association, 2nd Conference Number, July 1932
3 Punjab Library Association, 3rd Conference Number, April 1933
4 All-India Library Conference Number (Calcutta), October-December 1933
5 Rural Libraries in India, October-December 1935
6 University and Public Libraries in India, October-December 1936
7 All-India Library Conference Number (Lucknow), January-March 1938
8 Library Training in India, October-December 1938
9 All-India Library Conference Number (Patna), April-June 1940
10 Technical & Research Libraries in India (4 numbers), October 1941 to September 1942
11 Library Defence Number, October-December 1942
12 Libraries in India (Double Number), January-June 1943

32 RANGANATHAN'S BIBLIOGRAPHY

An elaborate bibliography of the writings by and on *Rao Sahib* (now *Padmashri*) Dr S R Ranganathan by Mr K M Sivaraman, then Classifier and Head of the Technical Section, Madras University Library, Madras, appeared in the January-June 1943, (Vol 13, No 2-3) of the *Modern librarian*

Mr K M Sivaraman, compiler of this bibliography, wrote

> "This bibliography has been prepared at the request of the Editor, Mr Sant Ram Bhatia This request synchronised with the compilation of the 50th year of the subject of the bibliography . . In spite of close association with the subject of this bibliography during most of the period covered by it and in spite of nearly 100 hours of hunting involved, we are not quite sure that the bibliography is complete.
>
> "This bibliography begins with the first published material traceable

which is an article entitled 'an introduction to the study of character formation' and published in the *Educational review* It belonged to 1916. The bibliography is brought up to the end of 1942 and thus covers virtually a quarter of a century

"The total number of items is 544 scattered through 71 organs, given by the key to abbreviations found at the end of the article "

33 PAPERS BY RANGANATHAN

Papers from Dr Ranganathan appeared in the various issues of the *Modern librarian* These are as under.

The Madras University Library, July 1932
School library as a social centre, October 1934
Rural libraries, October 1935
Idiosyncracies of periodical publications as viewed by the reference staff, January 1936
How to create reading habit, April-July 1936
Impact between Mathematics and Library Science, October-December 1939
Mathematical bibliography, January-March 1940
Absolute vs relative placing, October-December 1941
Research libraries in Madras, January-March 1942
Repercussion of the War on the Madras University Library, October-December 1942
Librarianship in Modern India, January-June 1943
Library Building and its site, January-March 1945

4 The Indian Librarian

The *Indian librarian* was founded in June 1946 In his foreword to the June 1946 issue, Dr Ranganathan wrote

> "Welcome *Indian librarian* Play your part in renascent India May you be blessed with all the vigour, harmony and wisdom necessary to serve our Motherland,
>
> "India is now re-awakening after centuries of slumber, she is regaining her freedom She wants to play her distinctive part in the lifting of humanity to a higher level of existence
>
> "To realise this aspiration of hers, it is necessary that one and all of her citizens must keep themselves ever abreast of the times. To do so, they should have within easy reach every recorded thought of all time and clime
>
> "To collect, organise and serve exactly and expeditiously all recorded thought is the function of the library profession. To discharge this func-

tion efficiently the profession should develop an ever-widening human outlook and keep on perfecting an ever-sharpening technique Thus, it has to do on a co-operative basis

"The function of the *Indian librarian* is to be a helpful medium for such a co-operative effort Its pages will ever be hospitable to every kind of nascent library-thought emanating from any part of the land It will act as a clearing house for every kind of library technique that may be invested anywhere in the land It will provide a meeting ground for all the librarians of India—young or old, learned or otherwise and creative or imitative

"The *Indian librarian* looks up to every librarian of India to help it forward, each in his measure—through contribution of thought, goodwill and subscription It seeks friendly co-operation from the library organs already in existence in India and elsewhere I believe that the creative work in library science has reached a level which justifies the addition of this new organ I bid it Godspeed "

41 Papers by Ranganathan

Dr Ranganathan's most inspiring articles appeared in the issues of the *Indian librarian* These are as under

Library literature in Future India, June 1946
Library classification an irony and a pointer, September 1946
Issue apparatus, December 1946
Peril of pure notation and might of mixed notation, March 1947
Anterior divisions and Mr Date's invention, June 1947
Vitalising library service in New India, September-December 1947
Isolation of a mode of formation of Focus, March 1948
Library responsibilities of Independent India, June 1948
Philosophy of public librarianship, September 1948

5 Punjab Library Association Revived

In 1947, came the partition of the province resulting in the uprooting and exchange of population The Punjab Library Association was also uprooted, but was rehabilitated early in 1948 in East Punjab and reorganised in Simla The Association held its First Provincial Library Conference and Book Festival at Simla in October 1948, in order to revive interest in books and to provide the truncated province food for promoting mental and cultural advancement of the community and to pave a way for re-establishing good libraries and setting up new libraries in the province The Hon'ble Mr Justice Teja Singh, Vice-Chancellor of the East Punjab University, who inaugurated the conference and Professor D C Sharma, (now M P), President of the Association pleaded for rehabilitation of libraries so that they may become repositories of valuable books lying uncared for in different parts of the province, due to exchange of population The Conference also passed several resolutions involving help from all sources, Government, public and local bodies, etc, in order to have a coordinated development of libraries and urging upon the Government of East Punjab, Pepsu and Himachal Pradesh to make as a part of their development plans adequate provisions for the establishment of new libraries the improvement of those existing and their efficient management

51 ACTIVITIES OF THE ASSOCIATION

The Association held library seminars, library conferences, book festivals in the years 1949, 1950, 1951, 1953, 1955, 1957, 1959, 1960, 1961 and 1962 in order to make the people not only book minded but also library minded, and these book festivals and library seminars were a great success and brought home to the public and the Government the importance of library for planned development of library service in the State The Union Ministry of Education also appreciated the service of the Association for the good work done by the Association in its own sphere by encouraging the growth of libraries and reading rooms, running library journals and calling conferences and meetings of librarians and friends of libraries The report was published in the *Education quarterly* June 1950

52 FUTURE PLANS

The Association has also set up a Library Advisory Service in co-operation with the Punjab University Library, Chandigarh Practical advice is given on matters concerning the establishment, equipment and administration of libraries Plans are afoot to provide an extended consultant service in regard to the setting up of new libraries

Selection of books and employment of suitable staff and their training, with a view to meet the difficulty in the organisation and running of new libraries recently set up in the State Although there are no Carnegies and Rockfellers in the Punjab, yet we do hope that friends of the library movement in the State and in other parts of the country will come forward to sponsor this cause and to make our plans realised as soon as possible so that we may be able to keep up the education of adults at the level needed for the industrial, political and cultural development of the State through libraries and library service

6 Felicitations

In offering Dr Ranganathan our sincerest feliciations on this auspicious occasion, Seventy-First Birthday, the Punjab State Library Association wish him a long life and excellent health to enable him to render still greater service to the cause of librarianship in India and abroad

PART M

LIBRARY ORGANISATION

CHAPTER MI

March fo Library Legislation in Madras

K M SIVARAMAN

0 Example of Baroda

NEARLY half a century ago, it was the Gaekwad of Baroda that built the first Library System in India. This was based mostly on administrative measures. As a consequence of this, the library service in the Baroda State began to lose in momentum after the lifetime of the Gaekwad. It was because that any social work cannot be maintained in full swing solely by administrative orders. This fact has been recognized by several of the countries all the world over and they have found out that the right way to build a national library system is by a carefully worked out library legislation.

01 AMBITION OF MADRAS

The Madras Library Association (here in after referred to as MALA) was anxious to have an effective library service throughout the State. It was also conscious of the difficulties in achieving this ideal and the experience of the other countries in this respect. Yet in 1931 it took upon itself the task of putting on the Statute Book of the Madras State a comprehensive Library Act. It is only after a persistant effort of more than fifteen years, that the Association realized its object; Madras made library history by the adoption of a Public Libraries Act in 1948. The vicissitudes of this Act are ably dealt with in the *Library Legistation—A handbook to the Madras Act.*[1] It is not my intention to summarize all that here. Nor is it intended to discuss the merits or the demerits of this Act. This also has been done in detail in the above book. I shall confine this paper to the part played by MALA, directly and indirectly, in bringing about this piece of social legislation and also give a brief account of the library service as it obtains at present in the Madras state.

1 Seed for the Act

The seed for the present library Act of Madras was selected even as early as 1930. Dr S R Ranganathan, who was then one of the Secretaries of the MALA, was invited to become the Secretary of the Library Service Section of the First

All Asia Library Conference held at Banaras on 26-30 December 1930. He then presented to the conference a draft Model Library Act for India and this was included in the printed papers offered to the Conference [2] This volume of the printed papers was widely distributed in advance to the librarians and the friends of library attending the Conference A complete session of the Conference was devoted to a detailed discussion of the several clauses in the Act and the amendments were recorded. This was printed in 1931 as Annexure VII of the Third Annual Report of the MALA and was widely circulated

11 Lesson from Bengal

This act was of a compulsory nature For instance, the library responsibility of the Local Bodies, the levying of a library cess, the Government grant to the Local Bodies for this purpose and every other provision was compulsory. Kumar Munindra Deb Rai Mahasai, a library enthusiast of Bengal, had the Model Act adapted by Ranganathan to the conditions of Bengal, wanted to introduce this bill into the Bengal Legislative Council within a few days But he was refused permission by the Governor General of India on account of its compulsory clauses This was a lesson to the MALA which wanted to have a library bill introduced into the Local Legislature of Madras. So the MALA removed the compulsory elements in the bill and made it acceptable to the Government

2 Draft Public Libraries Bill

In March 1931, Sir George Stanley, the then Governor of Madras, presided over the fourth inaugural meeting of the MALA In his address he gave an open assurance that he will "Give the matter (Library legislation) his personal attention when the bill is submitted to the Government for introduction into the Legislature" [3] The MALA was quick to act on this hint In July 1931, a committee consisting of Messers K V Krishnaswami Aiyar, T R Venkatarama Sarty and S R Ranganathan was appointed by the council of the MALA to redraft the bill already mentioned above, in a manner suitable for acceptance by the Government The result was the draft Bill[4] which was a purely permissive measure This draft bill was first considered and approved by the Council of the MALA at its meeting held in August 1931. The important amendment was to the financial clause which was made optional instead of obligatory This draft bill supplimented the existing provisions relating to libraries in the Local Boards and the District Municipalities Acts by providing methods and machinery for the implementation of those sections in a manner condusive for the growth of a comprehensive system of libraries in the State of Madras

21 Public Opinion on the Bill

Before getting the bill introduced into the Legislature, the MALA circulated it widely to all the Local Bodies and the Press. In general, every one welcomed library legislation on the lines chalked out in the Bill. However, there were also some criticisms

One of the leading dailies rightly commented, "A permissive Library Bill will not carry the movement far Compulsion is the essence of the stimulus required if libraries are to become as popular and as influential as S R Ranganathan and the Madras Library Association intended them to be. In no enterprise affecting the public welfare, should the good be allowed to become an enemy of the better. We would therefore urge the framers of the Madras Libraries Bill to overhaul its permissive provisions and introduce into it the element of compulsion without which the Bill is sure to become deceptive and ineffective [5]

As a contrast to this healthy criticism we have another, this time from a member of a Taluk Board in the State. "The provisions in the Bill are a complement to educated countries The rural areas of our country are not educated, any, they are illiterate So, such a Libraries Bill will not be of any use to Local Board's areas Secondly, the country is generally in an impoverished condition, any additional taxation will be felt as a great grievance both by the landlord and the tenant ".[6]

This reminds us of Buck, Goulbourne and Spooner of Great Britain who opposed in the Parliament a similar measure when it was discussed in that House [7]

Notwithstanding such stray oppositions, thanks to the intensive propaganda tours undertaken by Mr S M Fossil, another secretary of the MALA, the Bill was heartily supported by many Local Bodies In fact, by the end of 1932, we had in the files of the MALA resolutions from 13 District Boards, 30 Municipalities and 61 Taluk Boards accepting Bill and promising to implement it should it become law.

23 PUBLICITY THROUGH PRESS

The MALA was not perturbed by the oppositions to the introduction of the Bill Dr S R Ranganathan, one of the secretaries, was confident that he can gain the whole-hearted support for the Bill if he could educate the public on the benefits of the library legislation and also appraise the concerned Local Bodies of their obligations to the public He did this by publishing a series of articles in the local dailies under the pen name of *Libra*. These articles appeared in the last quarter of 1931 and dealt with such topics as the library functions of a State Government, Library mechanism of Local Bodies, Library finance of Local Bodies, and so on

24 INTRODUCTION INTO THE LEGISLATURE

In 1932, active steps were taken by the MALA to introduce the Bill in the Madras Legislative Council. Messrs Swami Venkatachalam Chettiar, one of the Vice-Presidents of the MALA, Basheer Ahmed Sayeed, a member of the Executive Council of the MALA and Hameed Khan, a member of the MALA, gave notice of the Bill and also wrote to His Excellency the Viceroy seeking his permission for introducing the Bill in the local Legislature The permission was received at the end of the year

241 SUPPORT OF THE GOVERNMENT

The bill was actually introduced in August 1933 by Mr Basheer Ahmed Sayeed He moved on 5 October for referring the Bill to a Select Committee At that time the Government was in full sympathy with this measure As a matter of fact, the Minister for Education assured the House of the support of the Government in the following words, "Mr President, the Government do not object to this motion to refer the Bill to a Select Committee The Government are no doubt in sympathy with the objects of the Bill, as explained in the preamble and the Statement of Objects and Reasons."[8]

242 SELECT COMMITTEE AND AFTER

Mr K V Krishnaswami Aiyar, the President of the MALA, and Mr W Erlam Smith, the then Director of Public Instruction of Madras were appointed as Expert Members of the Legislative Council for the consideration of this Bill They were sworn in on 10 November 1933, and on this date the earlier motion for referring this Bill to a Select Committee was carried without any opposition A Select Committee of 37 members was formed to consider the Bill It met many times and considered the several sections of the Bill very carefully and submitted its report to the Legislative Council in 1934. At this stage, the Secretary for Local Self Government, a member of the Indian Civil Service, brought in an amendment which sought to appropriate a portion of the library fund to the expenditure on the staff of the Department of Local Self Government to meet the extra work involved in working the Act The MALA was not prepared to accept this strange and vicious amendment and hence did not proceed further with the Bill. It felt that it might be an advantage if the Bill could be reintroduced at a later period with certain modifications which the discussion in the Legislative Council and elsewhere had suggested Further, in view of the impending constitutional changes in the country, the MALA believed that a popular measure like the Public Library Bill would have a better and more sympathetic reception in the people's legislature which would function from 1 April 1937

3 Second Attempt

In October 1937, Mr Basheer Ahmed Sayeed gave notice of a modified draft of the Bill But the Governor, Lord Erskine, refused permission for the introduction of this Bill in the Legislature though it was believed that the Government had a soft corner for the cause of libraries The reason for this was given by him in his inaugural address to the MALA on 28 March 1938 He said.

"I fully agree as to the need for extending the library service through out to the Urban and Rural areas and for encouraging reading as an educative aid to democracy and in order to stop people from relapsing to illiteracy I understand that the Director of Public Instruction is quite ready to cooperate with the Association in working out concrete suggestions. I should like to explain the main reason why the recent Public Libraries Bill had to be opposed was the fact that it was likely to throw additional burden on the finances of the Presidency "[9]

4 State of Dormancy

Encouraged by these words, on 27 August 1938, a deputation of the MALA consisting of Messrs K V Krishnaswami Aiyer, S R Ranganathan, K Balasubramain Aiyar and Basheer Ahmed Sayeed waited on the Chief Minister and the Minister for Education The Ministers informed the deputation that they would examine whether the library movement could not be worked better by executive orders instead of a legislative measure The outcome of this was the undesirable move of enabling the school libraries to function as public libraries in their areas The details of this move is contained in G O 1421 (Edn) dated 22 June 1939 of the Education and Public Health Department

On account of this stubborn attitude of the Government to resist any move for bringing about a Library Legislation and the political conditions prevailing at that time, the MALA did not want to press the idea However, in 1944, when Mr K V Krishnaswami Aiyar was co-opted as member of the Education Sub-committee of the Post-war Reconstruction Committee of Madras, he moved a resolution that a Library Act be placed in the Statute Book of the State of Madras. No action seems to have been taken on this except that of assigning the paper to the archives of the Government

5 A Favourable Chance

It was a chance in 1946 that made conditions favourable for the sprouting of the seed of library legislation Dr Ranganathan successfully planted this seed. Here is an account of this in his own words

"In my morning walk, I found the name board of Mr Avinasilingam Chettiar, the Minister for Education, in Teynanpet . . . it had never occurred to me that I should meet him I had known him earlier I met him on the next day He was very genial He said, 'How is it that you have gone away from your State, when we came into power? If you were here we could do much to realize our old wishes and dream.' I said that I was always available for consultation. I also put my draft library bill into his hands I also gave him the memorandum He sent it to S R U Savur, the then Director of Public Instruction for scrutiny. Savur was all help He said, 'What do I know about library matters ? I accept your proposal I am writing to the Minister accordingly.'"[10]

51 Bill becomes an Act

In 1947, the Government modified this draft bill for introduction into the legislature The Minister for Education had hours of discussion with Dr S R Ranganathan about some of the changes introduced by him Though some of the changes were not acceptable to its author, in his anxiety to have a Library Act for Madras, he accepted them on the assurance of the Minister that the defects could be removed by framing suitable rules for the working of the Act The original bill itself was a weak one These amendments made it even more defective It was this bill that was introduced into the legislature in 1948 as a Government measure. It was duly referred to a Select Committee At this stage, the Bill underwent further modifications which contributed to many of the inherrent defects in the present Act. Then the bill, as it was reported on by the Select Committee, came back to the legislature and was passed into an Act. This became the Madras Act (XXIV of 1948) It received the assent of the Governor-General on 29 January 1949, and it was first published in the *Fort St George gazette* on 8 February 1949

52 Implementation of the Act

But again there was disappointment and delay in the implementation of the Act. This was due to the resignation of the champion of the cause, Mr Avinasilingam Chettiar, from the Cabinet In spite of the appointment of a Special Officer for Libraries soon after the passing of the Act, it took nearly two years to publish the Rules Though they had been furnished to the Minister by Dr Ranganathan at the former's request in November 1948, these Rules were issued as G O 627, Education, dated 28 February 1950. Under these Rules, section 2-19 of the Act came into force on 1 April 1950 The Director of Public Instruction, Madras, was appointed the *ex-officio* Director of Public Libraries On the same date, the Government decided that the Connemara Public Library in Madras be recognized as the State Central Library under the Act.

The formation of Local Library Authorities began in July 1950. By the end of September in that year, most of the districts had their Local Library Authorities. As the first step in the administration of the Act, these Local Library Authorities passed resolutions even in their first meetings for the levy of library cess in their respective areas.

Under Rule 5 (2) (*iii*) of the Madras Public Library Rules, Mr K V Krishnaswami Aiyar, was nominated by the Government to the newly formed Local Library Authority of the Madras City. The State Library Committee was also formed at this time Under Rule (2) (*vii*) of the Madras Public Library Rules, the Government requested the MALA to elect a member to represent the Association in this Committee At its meeting held on 26 March 1950, Mr K M Sivaraman, one of the Secretaries, was elected for this purpose and he still continues to be a member of the State Library Committee.

In the initial stage, the Local Library Authorities could not function very actively on account of many difficulties—the paucity of trained staff, lack of understanding of the matter connected with the library administration, want of sufficient accommodation to stack the books, and so on. G O 1941 of 4 July 1953, which is the first report on the work of the Public Libraries in Madras during 1951/52, deals with some of these points At the suggestion of the State Library Committee, the Government requested all district collectors to help the Local Library Authorites in their respective areas in their efforts to secure accommodation for the housing of District Central Libraries By the end of 1952/53, all the Local Library Authorities except those of Madras and Salem had established their District Central Libraries

6 MALA's Memorandum on the Working of the Act

After observing the working of the Act for nearly five years, the MALA began to see some defects in its working The defects were due to the fact that the provision of public library service by the Government was a new idea for our country On account of this, neither the Local Library Authorities nor the personnel employed by them were familiar with the problems connected with the work This ignorance led to many a mistake even at the initial stages The MALA wanted to rectify these defects. Dr S R Ranganathan had a discussion on 9 April 1955 with Mr C Subramaniam, the Minister for Education, and made valuable suggestions for the rectification of these defects, and in general, to work the Act on efficient lines He presented a memorandum on that occasion which dealt with Library Personnel, functions of the Local Library Authorities, State Library Committee, Book Selection, Book Purchase and other matters A summary of this will be found in the *Annual report* of the MALA for the year 1955 [11]

7 Over-all Picture of the Present

During the last few years, the Library Authorities are working as best as they could under the limitations they are subjected to.

As provided in the Act, there is a Local Library Authority for each of the 12 out of the 13 districts of the Madras State The newly created Kanyakumari district alone, has not got a library Authority. The Local Library Authorities consist of 11 to 27 members who are usually representatives of local bodies of the district, heads of educational institutions in the district and office-bearers of the recognized libraries in the district The Chairman is selected by the members from among themselves The District Educational Officer is the ex-officio Secretary The Director of Public Instruction is the ex-officio Director of Public Libraries and he exercises powers of supervision and control over the work of all the Local Library Authorities He is advised by the State Library Committee on such matters relating to libraries as may be referred to them by the Government The Library fund is made of the income from the library cess collected as a surcharge equal to 3 per cent of the property tax, the contribution by the Government of an amount equal to the total cess collected, and other miscellaneous sources such as fees, fines, etc collected by the Local Library Authorities, the special grants which the Government may make for any specific purpose connected with libraries, and gifts from the public

Considering the limitations under which the Local Library Authorities have to work, it should be said that the library service in the Madras State has made fairly good progress The statistical data for a few years will reveal this fact

The statistics furnished below,are based mostly on the reports submitted by the Director of Public Libraries to the State Library Committee and the reports of the Government on the working of the Act In the case of the number of visitors and stock of books, the statistics are available from 1957/58 only Hence for the years previous to this, the statistics have been completed from other sources

The fall in the member of Branch Libraries in 1958/59 was due to the fact that some of the then existing branches were transferred to the Andhra State The Madras City alone has 74 branches. The Local Library Authority of the city of Madras does not get Government grant

The slight rise and falls in the above figures should be interpreted in the light of the reshuffling of the Branch Libraries in the districts on account of the reorganization of the States in 1956

8 Inadequacy of Finance

In spite of the fact that about twenty lakhs of rupees are available for expenditure on public libraries, it is found that in most of the districts only two-thirds is of the area covered by library service In this connection, the observation of Mr V N Subbarayan, the Chairman of the Local Library Authority of the Madras city is significant

He says, "In view of the very low income of the majority of the population in India, our need for free public library service is even greater than in Britain. In actual practice, I have found that there are many persons who are unable to pay the small deposit amount that is necessary for taking books home even though the service is free" If all the other Local Library Authorities also feel like this and act in concert, it may be possible to do away with the practice of demanding a deposit from the readers for the use of books Further, if the Central Government comes forward and helps the Madras State by providing a liberal grant, it will be possible to have a fine grid of libraries throughout the State and enable every citizen—urban or rural—to have the benefit of the use of the libraries

9 The Abiogenesis of the Madras Act

When the composite Madras State was divided into the Andhra and Madras States, the former adopted the entire Act as Andhra Public Libraries Act It was only very recently that this was revised under the guidance of Dr Ranganathan and has become the Andhra Pradesh Public Libraries Act. In 1954, the Madras Act stimulated the neighbouring area of the then Hyderabad State and it had its own Public Libraries Act put on the Statute Book of that State As the result of the reorganization of the States in 1956, some of the districts from the Madras and Hyderabad States were transferred to Kerala, Maharashtra, and Mysore Thus it happens that some of the districts in Kerala, Maharashtra and Mysore States have the Public Libraries Act in force This is acting as a leaven in making these States turn their minds towards Library Legislation The Government of Kerala invited Dr Ranganathan in July 1959 and consulted him on the reorganization of the library service in that State He presented to the Government his report entitled *Library development plan with a draft bill for Kerala* This has been published in May 1960 and is receiving the attention of that Government The States of Mysore and Bombay have also approached Dr Ranganathan on this subject That is how the Madras Public Libraries Act has become abiogenetic May this Act further stimulate all the other States without public Libraries Act to put a similar Act in their respective Statute Books

SERVICE STATIONS

Type of Libraries	1955/56	1956/57	1957/58	1958/59	1959/60
District Central Libraries	12	12	12	12	12
Branch Libraries	129	253	486	425	450
Delivery Stations	342	335	493	539	606

The fall in the members of Branch Libraries in 1958/59 was due to the fact that some of the then existing branches were transferred to the Andhra State The Madras City alone has 74 branches

LIBRARY FINANCE

Income and expenditure

(*in rupees*)

Details	1955/56	1956/57	1957/58	1958/59	1959/60
Library Cess Collected	7,46,933	7,13,157	11,12,632	11,32,282	12,87,456
Govt Contribution	6,34,306	7,51,385	5,34,876	9,91,980	6,93,237
Total Income	13,81,239	14,64,542	16,47,508	21,23,262	19,80,693
Expenditure	12,95,951	16,13,656	23,82,661	20,99,903	26,28,566

The Local Library Authority of the city of Madras does not get Government grant

STOCK OF BOOKS AND VISITORS

Details	1955/56	1956/57	1957/58	1958/59	1959/60
Stock of Books	9,56,990	7,92,556	10,09,540	10,06,151	11,85,503
No of Visiters	52,20,617	93,21,360	95,16,696	80,70,182	167,82,628

The slight rise and falls in the above figures should be interpreted in the light of the reshuffling of the Branch Libraries in the district on account of the reorganization of the States in 1956

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CHAPTER M2

Dr Ranganathan's Plan for Library Development in Bombay

R S PARKHI

1 Bombay Plan

SINCE the year 1931 Dr Ranganathan has made incessant efforts for the introduction of library legislation in India. His Library Bill for Bombay is one of the so many Library Bills drafted by him for the development of libraries in the various States in India. It was given in a book entitled *Library development plan with a draft library bill for the Province of Bombay,* and published by Padma Publications Ltd, Bombay in 1947. It was the outcome of the two lectures on 'Library Legislation: Why, What and How' delivered by him at the University of Bombay in February 1946.

11 CHAPTERS

The book runs into seven chapters, viz 1 Library; 2 Library Movement; 3 Library Legislation; 4 Library Lay-out; 5 Library manpower of the Province of Bombay; 6 Library Finance for the Province of Bombay; and 7 Library Bill for the Province of Bombay.

2 Library Service

The special feature of the library service in India that requires to be developed is vividly depicted in the book by the author thus:

> If the library is made a vital force in India, she will be able to apply a much needed corrective to the library service in other lands. There the library is touching man, only at the level of mind. It is unable to reach the spirit in him. The combined effect of an educational and library system, which exhausts itself in a peripheral intellectual sheath of man, makes a monster of him. We have had two demonstrations of this in a life time. This can be avoided only if the school and the library, not only enrich the memory and sharpen the intellect, but also sublimate the emotion

and release the Inner Spirit in man The technique of making the Inner Spirit function had been forgotten in the West. But India remembers it, India has still amidst her millions, souls who are aware at the spiritual level and can manipulate from there the intellectual and material levels in all harmony and peace The distinctive mission of Indian librarianship is to use these helps, still preserved in the Indian tradition and develop the proper technique of activating the spirit in man, and enrich the library profession all the world over by a knowledge and demonstration of this technique

3 Library Finance

The sources of Provincial Library Finance as given by the author are as follows

1 the amount which should be provided by the Government for the maintenance of the Provincial Central Library,
2 the grant which should be paid to the Public Libraries by the Government of the Province;
3 the amount which should be spent by the Government for the supply of trained librarians, and
4 the amount which should be raised as library rates by the Local Library Authorities

"On the capital or non-recurring side, money should be found for the erection of library buildings and their equipment, including librachines This amount will not be-required in one year, it may be spread over about 30 years "

31 FINANCIAL IMPLICATIONS

Regarding the financial implications of the Library Bill, the author observes thus

"There are three ways of arriving at the financial implications of the Library Bill

1 Per capita method,
2 Method of details, and
3 Method of proportion

"In the per capita method it is assumed that the Government should spend 8 annas (50 nP) per year per head of adult population, 6 annas (37 nP) in the form of library grants to public libraries and 2 annas (12 nP) to meet the cost of direction and maintenance of the Provincial Central Library. This is determined by the salary level which prevails and the cost of publications It is only half of what is being spent in some of the Western countries. As literacy and book-production advances, the per capita rate may have to be fixed at a higher amount."

"In the method of details, we shall have to take into account the ultimate requirements of the Library Fund of each of the Local Library Authorities and of the Provincial Library Fund . It has been found from experience that in an efficient library system which provides the necessary human agency to make the public reap the fullest benefits from the libraries, the expenditure stands equally divided between the cost of the establishment on the one side and the rest of the cost—cost of books, binding, and other administrative expenses—on the other "

"In the method of proportion, it is assumed that, in conformity with what prevails in other lands, the library budget should be 6¼ per cent of the educational budget or 1 per cent of the total budget. The 6¼ per cent of the educational budget is similar to the provision of maintenance charges for public buildings The educational expenditure is from this point of view, looked upon as capital spent for the erection of the edifice of library in the nation and the library expenditure is looked upon as the sum required for annual repairs to keep the edifice in good condition And yet the public library, not only keeps the edifice of literacy and education in good repair, but also puts up to it further flats, so to speak, as it contributes to the perpetual further education of one and all of the citizens of the States."

4 Library Bill

The last chapter gives a draft Library Bill for the Province of Bombay.

According to the Bill, the Minister of Education shall be the Provincial Library Authority and to help him in the discharge of his duties he will appoint a Director of Libraries who will supervise over all the Local Library Authorities in the Province, will manage the Provincial Central Library, deal with all the matters of Copyright Act, and centralise all technical work such as acquisition, classification, cataloguing and co-ordination of the service and maintenance of reading materials in the public, academic, departmental and outlier libraries in the Province Thus the Bill goes on giving all the details required for organising a net-work of libraries throughout the province

The first step that the Provincial Library Authority should take is the appointment of the Director of Libraries "In view of the exceptionally heavy responsibilities which will rest on the first Director, he must be selected on grounds of the highest efficiency, competence and integrity While the responsibility for the development of the library system will rest ultimately with the Minister of Education, the essential tasks of preparing the ground for these decisions and for executing them in co-operation with the Local Library Authorities will devolve on the Director. He must endeavour, within the scope of his functions, to integrate the activities of the whole compass of the library systems of the Nation—public, departmental, academic and business library systems. It is his leadership which will determine their character and efficiency. It is on him that will mainly fall the duty of creating and maintaining a team spirit in the body of librarians working in the different parts of the province It will be the additional duty of the first Director to give the necessary in-service training to the first recruits to the service of librarians in the province In the eyes of the public, no less than in the eyes of the library profession, he must embody, the principles and the ideals of the Library Act."

5 Government's Responsibility

It is quite essential for the present Maharashtra State to give serious thought to the valuable ideas expressed in the book by the author and try to bring them into practice as early as possible, so that we shall have a sound foundation for the future development of libraries and library movement in the State It is good that the State has already maintained a department of libraries with a Curator and three Assistant Curators since 1947 and the department has done very valuable work so far Now the time is ripe for the State to take immediate decision to enact a Library Act on the basis of the Library Bill as laid down in the book It will solve the problem of the coordination of libraries, a good deal of wastage will be avoided, and the whole library movement in the State will reach the tower of prosperity, and every library in the State will be enabled to develop intimate contact between books and readers through efficient reference service and create congenial and inviting atmosphere for the ever increasing number of readers visiting them and making them their favourite and haunting places

CHAPTER M3

Books for Norwegian Seamen

ARNI KILDAL

1 Dawn of Travelling Libraries

TRAVELLING libraries were first introduced in Norway in 1902 when the Government Road-building Department sent a number of boxes of selected books to their employees in remote districts of the country. A few years later, a campaign was started for the purpose of using the same system for the benefit of Norwegian seamen in the foreign trade. Meetings of seamen's ministers appealed to the government for assistance in having the idea realized, and in 1909 a government committee was appointed to attend to the matter. Representatives of shipowners' and seamen's organizations joined government representatives as member of the committee, and in 1910 Norwegian vessels were equipped with the first book cases, each case containing about 25 volumes to start with, and a few more later on.

11 WAR PERIODS

The number of book cases increased rapidly during the first years, but in the First World War many Norwegian ships were "spurlos versenkt", and few book cases survived the catastrophe. After the War the work was resumed, and in 1919 and in 1935 there were respectively 22 and 150 cases in circulation. The action suffered a new set-back during the Second World War, and by and by the activities of the government committees in this field have come to a standstill, and other methods were adopted.

2 Ship Libraries

Most significant was the introduction of "permanent ship libraries" on board Norwegian vessels. The idea was promoted in the middle of the twenties by Mr Gunnar Stenersen, then one of the leaders of the Central Bureau of Public Libraries. For many years Mr Stenersen was a flame of fire in the work for this idea, and mainly due to his untiring agitation, a number of shipowners supported it and established such libraries in their ships. In 1926, the Oslo shipowner Hjelm Waage organized a sample library in his new tanker Raila

(8300 tons). The library contained 150 volumes to start with, solidly bound and with light and beautiful colors, fiction and non-fiction respectively The captain of the vessel reported during the maiden voyage that everybody on board was interested and that the loan statistics reached very high figures

However economic difficulties set in In spite of the fact that some shipowners were interested, public support appeared to be needed For a couple of years the national "money lottery" appropriated certain amounts, but not till 1937 did the government step in and support the ship libraries with regular annual appropriations, 10,000 kroner to start with and 20,000 kroner later on. The government appropriations were used both for the establishment of new ship libraries and for supplementing old ones

21 Book Collection

As time passed the new libraries started with a larger collection of books, even amounting to more than 1000 volumes Freight vessels from 8,000 to 10,000 tons usually were equipped with libraries containing from 300 to 400 volumes To start with the books were mostly of the entertaining type, but later on popular non-fiction books found their natural places in the libraries Often the libraries contained fifty percent non-fiction. For many years the libraries were obliged to purchase copies of all text-books used in the courses of the Norwegian Seamen's School Seamen who wished to prepare themselves for such courses while on board ship found an invaluable help in the library

3 **Seaman's Book**

In 1929, the Central Bureau of Public Libraries published a bulky work entitled *Seaman's book*, containing material needed for a further theoretical instruction in seamanship Norwegian shipping, whaling and naval matters are described in detail by authorities in the various fields, and in a very popular and understandable form

4 **Growth of Ship Libraries**

It was encouraging to note how rapidly the idea of ship libraries gained ground as the years passed In 1926, there was 11 vessels equipped with ship libraries, increasing to 160 in 1934 and 376 in 1940 The number of volumes grew from 1947 in 1926 to nearly 100,000 when the Second World War started At the same time more than 80 shipping companies participated in the movement About 14 per cent of the libraries were totally renewed in 1937.

The captains on board reported conscientiously on the use of the libraries On the M/S Saga every member of the crew had borrowed books, on an average 13 volume each during a three months' period in 1926 The most popular authors were all Scandinavians, namely Hamsun, Elias Kreemer, Sigrid Undset, Selma Lagerlof and Jonas Lie.

41 CATALOGUE

Printed catalogues were published for all the libraries Let us look at the catalogue of the library on the S/S Kosmos There were 547 volumes, 375 volumes of fiction and 172 of non-fiction Of the latter group 15 v dealt with religion and philosophy, 13 v with the social sciences, 11 v with languages, 15 v with natural science, 38 v with sports, 23 v with biography, 24 v with history, and 39 v with geography and travel

42 CIRCULATION

The interest was growing steadily, and it often occured that all the seamen were borrowers Statistics reported that seamen ranged very high as readers as compared to people living ashore A statistical table listing the loans from Norwegian Public Libraries during the fiscal year of 1936/37 shows that the Oslo Library (Deichmanske Bibliotek) heads the list with a little more than 1 million volumes lent, followed by the Bergen Public Library with about 400,000 volumes As a good number there appear the ship libraries with 376,000 volumes lent, far more than the public libraries of larger cities as Trondheim, Stavanger, Kristiansand and Drammen

The library on board the M/S Marıdal gained particular distinction With a book collection of 350 volumes, the total loans during one single year amounted to 1924 volumes, which means an average of 62 volumes for each borrower

5 International Co-operation

During this work for the Norwegian ship libraries, Mr Stenersen became convinced that the matter ought to be placed on an international plane This might stimulate the work in each country, and there were certain sides to the question which might better be attended to through international cooperation Therefore, he began to cooperate with the World Association for Adult Education, the International Red Cross, the International Library Congresses, the health and welfare conferences for seamen in the merchant marine, Scandinavian library congresses, and so on The purpose was to make the general public everywhere, and particularly the appropriating authorities, understand that seamen's needs for good books should be placed absolutely even with the corresponding need among the people ashore The propaganda started in this direction seemed to promise handsome results, but the war interrupted the work which had to be suspended

6 Prize Contests

On the interior front, the propaganda soon showed more tangible results, however, with Mr Stenersen as a very active leader. He presented the idea of arranging prize contests for Norwegian seamen and secured economic support from certain shipowners, thus enabling him to realize the idea A special committee was appointed for the purpose of judging the papers delivered by the participants in the contest. Members of the committee were E Bryn (director of navigation), K Domaas (editor), Hjelm Waage (shipowner), A Kildal (library counsellor) and C Stenersen, the latter acting as Secretary of the committee

The first contest was arranged in 1938 It was divided into four groups The first group included members of the crew who were under 20 years They were invited to give an account of their first voyage Members over 20 years should answer this question "Why did you choose a seaman's craft ?" The third group included captains deck officers and chief engineers who were asked to write an account of the "significance of the shipping trade to our country" Finally there was a group which was open to everybody. Participants were free to choose one of the two alternatives, one paper entitled "What is needed to make life on board pleasant and comfortable and to establish good relations between officers and crew and between these mutually", and the other, "give a narrative of the book which has made the strongest impression on you"

No less than 170 answers were sent to the committee from all corners of the world Eleven prizes, each amounting to 250 Norwegian kroner were distributed The best papers were sold to weekly magazines, enabling the committee to distribute 99 extraordinary prizes in the form of a handy one-volume encyclopedia 112 prizes in all were distributed to the 170 participants in the contest.

The object of another contest was a scholarship for further education, amounting to 1000 Norwegian kroner Only people who needed economic support for this were allowed to participate Winners were ordered to follow courses at a Norwegian seamen's school, ship engineering school, radio school or steward school The paper to be written was "What can be done to increase safety at sea ?"

The next year (1939) the contests were continued Among the papers given, the following may be mentioned "Give an account of the seaport town that impressed you most highly", "Which type of ship will you prefer to serve on, and why?", "Which kind of books should preferably be found in a ship library?", "Which proportion should there be between fiction and non-fiction ?", "How should I adjust myself to find life on board pleasant ?", "Which are the advantages of the ship library ?" and "Which are the three novels you have appreciated most ?"

Many people participated in all the contests, and the project contributed much to stimulate interest in the libraries Answering the question of the value of ship libraries, all the participants agreed that it was very high. In an editorial on the subject, Mr Knut Domaas, the editor of the Norwegian Commerce & Shipping Gazette, voiced the following opinion.

"The answers give an overwhelming impression of what a blessing it is to the crew to have a library on board a ship. It is evident that the seaman and the crew as a whole have found the books of great value and that the library has offered them a feeling of comfort which they should not have been able to gain otherwise Statistics show on an average 20 loans per person each year An astonishingly high number of non-fiction books have been borrowed, and the seamen especially emphasize the value of this kind of literature. Engineers and first mates are to study books on technical science, navigation and languages, and other members of the group do the same Many of them underscore the necessity of supplementing the non-fiction group of the ship library We forward the proposition to the shipowners with our warmest recommendation."

The same editorial finally contains the following appeal. "There can be no doubt that good reading raises the standing of seamen, both in regard to professional capacity and general culture It contributes to greater comfort on board, at the same time as the literature helps the seamen to live a richer life. There exists an enormous need of reading on board the ships The seamen will appreciate having good books, and newspapers also from the home country. Let them get this material"

7 Value of the Ship Library

As a little example of the seamen's own attitude to the question of the value of the library, the following paper, handed in by one of the participants in one of the contests, may serve It is written by a 17-years-old ordinary seaman, Oivind Bjornstad, on board the M/T "Kola"

The Value of the ship library

"In the city of Norway where I have lived, I have used the public library from my childhood days and consequently have read and learned much. One day, however, my desire to be a seaman was fulfilled I cannot describe my joy when I packed my bag and went on board One special thing which friends of mine had apoken about interested me immensely There was a ship library on board I remember that I asked twice to have the statement confirmed I went on board, and on Saturday, the library was open The library was not large, but the books were good, and that is the important thing The system used were clear and easy for the borrowers Printed catalogs were placed in all cabins so that the seamen might acquaint themselves with the contents of the library

I have not much experience so far, but on vessels bound for the long voyages life is often sad and uncomfortable, particularly so in a tanker like the one where I work For the most part you see nothing but the ocean, and the time in port is often so short that we do not even get a chance to go ashore and buy a pair of trousers. Under such conditions the books on board are of particular value I feel sure that if the seamen had not had the library on board they would have resorted to lighter reading when they got ashore, to start with at least. Personally I cannot think anything better and more stimulating than to sit on deck and read in the evening in a tropical climate while the mild trade winds cool me off all over. Both in good and in bad weather the book follows me and increases my knowledge in the various fields Through the books we learn much that we did not find time to pick up during the school years Many young people living ashore have a chance to continue their education in one way or other, often by purchasing books to be owned but at sea it is different On surroundings and rural districts, many of them have not held a book in their hands since they left school It appears that the latter particularly appreciate the value of the library, sharing this pleasure, however, with everybody concerned.

On board the ship where I work, the selection of books is most excellent All the groups of books are well represented—school books, medical books, books on sports, novels, books on geography and travel, etc

As I said before, it is sad to be on a boat like this one, but I certainly do not know how it would have been if we had not had the ship library to help us"

8 Value of Books

The high value of certain books is emphasized in some of the papers The following statement by a young man who hopes to become a first mate is typical

Which book has been of the highest value to you ?

"Like many others I have been troubled when thinking of what I should reach in life My aim was to pass an examination for first mates To enter the special school in this field without any preparatory training made me nervous when I considered it However, my nerves certainly changed for the better after I had visited the ship library and crossed the storm bridge and run down to my cabin with a heavy book under my arm I had secured a test book on navigation, written by A Cran and U Bergersen, and felt like a different man I have read much of it and borrowed it many times Indeed, I expect to borrow it even more times It has opened my eyes, and I am no longer the nervous and insecure young boy that I was before. Now I feel much more confident, and I presume that many of my ship mates agree with me "

91 Reading Interest

Some of the papers contain rather humorous points One of the seamen listed the three novels he appreciated most in the following way

1 Growth of the soil by Knut Hamsun
2 Roald Amundsen as he was by Odd Arnesen
3 The Raudal dance by Mikkjel Fonhus

No explanation is needed, as I hope that everybody interested in books has read them.

To me, a book in the hand is better than a girl on my knee.

Strong words they are, and many reflections they may shape. It is merely to be hoped that the popularity of the ship libraries should not influence the birth statistics too much

92 **Circulating Libraries**

During the last War a Social Committee for Norwegian Seamen in America raised a campaign to acquire books for the Norwegian merchant marine, and succeeded in bringing together between 400 and 500 book cases for this purpose. However, most of them were lost during the war, and in the summer of 1948 another campaign for this purpose was started in Norway, collecting in all about 60,000 volumes, of which 22,000 or 25,000 volumes were fit to use They were placed in practical book cases containing about 40 volumes in each

93 **Welfare Fund and Welfare Council**

Just before these activities, however, another movement was started to help and benefit Norwegian seamen, resulting in the establishment of a "Welfare Funds" and a "Welfare Council" The appropriating authorities of Norway resolved to transfer to the Welfare Fund 10 million kroner of the surplus of the Nortraship organization, and it was decided to have the government the shipowners and the seamen respectively contribute regular monthly shares to this fund In this way the finances of the institution were secured

One of the activities of the Welfare Fund and its office has been to furnish Norwegian vessels with good books, and the number of books has been steadily on the increase, reaching a figure of 564 book cases, containing in all 20,000 volumes in 1959 The circulating libraries are regularly supplemented Not merely the merchant marine, but even seamen's hotels in foreign ports have been furnished with libraries along the same line The seamen are offered the opportunity to buy books at a very low cost, thus being able to lay the foundation of a private library It is figured that the Welfare Council spends 40,000 kroner on its book service each year As this amount admittedly is too modest, however, an agreement recently has been made with the Government to the effect that an extraordinary annual grant of 25,000 kroner be offered on the basis that a trained librarian be attached to the work and that the whole library activity concerned be given the status of a "central library".

CHAPTER M4

Bookmobile Service in Hawaii

MARGARET GRAY

0 Mobile Service in a Decade

"To most of us a library is an imposing building near the centre of town where we go for help and information on every subject under the sun. But this is not the way rural Hawaii pictures the library. To Oahu's rural school children a library comes on wheels to their very door on its appointed schedule. Rain or shine, the book car goes all over the island distributing its gifts.

"As the Bookmobile comes up the road in a cloud of red dust a murmur of 'Liberry's come' runs through the school room. Eyes are kept on the window as one class leaves the school room to choose their books and as the next class takes its turn. . . No, the truck isn't very large but some very ingenious engineer planned well, for when the sides are lifted high on hinges, and shelves are pulled out of the center, more than 2,000 books show their bright covers. A table is set up on the school lawn with the implements of books charging arranged and the fun begins . . . these students are hungry for books. No school library could begin to supply their demands . . . what do the Hawaiian, Chinese, Filipino and Japanese school children of Oahu read ? Just what every other American child reads. Children are the most conservative readers in the world. The old favorites starting with the little red hen and Andersen's *Fairy tale, Through Pinocchio, Robin Hood, Treasure Island,* and the *Three Musketeers* have always proved the children will instinctively choose the best in reading if they have a chance. No child who has been exposed to good books will rest until he has read all his hands can reach. Good reading makes good citizens. Curiosity is a wonderful teacher. Many a body with an inquiring mind has planned his life's work in Science, Medicine, Agriculture, or Business because he found a book on that subject especially written for his understanding on some library bookshelf.

"So the next time you ride by the main library, don't think of that building as the library of Hawaii. It's just the nerve center with streams of books going out into the life of all Oahu with the Library on Wheels—the books car—the Library's most active worker."

So wrote Katherine McMahon in *Paradise of the Pacific magazine* in April, 1945. At that date the Bookmobile service on the Island of Oahu was in its infancy.

It had been started first in 1935 and had caught on quickly with the school children who were its only borrowers

01 Next Decade and a Half

Today, fifteen years later, the Bookmobile (actually "The Bookmobiles", for there are now two) covers the entire Island of Oahu, and serves adults as well as children. Twenty-three schools are served and eighty-two community stops are made At a school stop, the classes from 3rd through 6th grade visit the Bookmobile, with regularly scheduled 20 minute periods In the twenty minutes the older children—4th to 6th grades—return the books they borrowed on the previous visit (these are placed on the counter at the front of the Bookmobile where the Driver, sitting in his Driver's seat which has been swivelled exactly around, removes the date cards) They then browse through the collection and choose the books they wish (two books for 4th grades, three books for 5th and 6th grades). After that they take them to the charge out desk inside the Bookmobile and at the rear There the Clerk charges them out by means of the Photographic charging machine which films book card, date due card, and borrower's identification card This is a new charging system on our Bookmobiles, having been put into effect on September 1, 1960 Prior to that time, the children wrote their names on the book cards The Photo-charging not only makes for far greater accuracy in our records but saves a great deal of time since it was a long laborious process for some of the children to write their names on several book cards

1 **Borrowing**

The little 3rd grades borrow their books in a different manner Each 3rd grade teacher chooses a committee of five children to go to the Bookmobile and select a collection of twentyfive books for the entire class Again twenty minutes (or less, if the schedule is a 'tight' one) is allowed for the committee, and the Bookmobile Librarian takes special pains to help these little children get recreational books or possibly books on science or transportation or any other subject that the teacher may have told them to ask for Sometimes—and this is specially fortunate—the 3rd grade teacher comes with the committee and together we all choose the books most nearly suited to the needs of the class The teacher of Kindergarten and 1st and 2nd grades come by themselves and choose a set of ten books to use with their classes.

The upper grades are responsible for the books they borrow and of course, they may take them home to read. The 3rd grades are not responsible for the collection they choose unless they sign on a special card in the classroom and take one of the books home. In that case they are responsible for returning the book to the Bookmobile on time and in good condition. The 3rd grades teacher is not held responsible for the books borrowed by the committee, and in the case for occasional loss or damage to these books this is assumed by the Bookmobile and is put down to "Profit and Loss"

11 LOSS OF BOOKS

In the case of the upper graders, if a book is lost or damaged beyond repair, the full price of replacement is charged (from a scale that gives a blanket price for fiction, non-fiction, readers, and picture books) Five or ten cents may be charged for a crayoned or torn page and the Librarian uses her own judgement, trying most of all get at the cause of the damage (Frequently a "Little Sister" or "My Dog") and planning with the child some way to prevent further damages ("Can your mother help you find a good safe place for your Bookmobile books ?")

12 REVISION

We have said that the children return the books borrowed on the last visit to the Bookmobile Driver. As soon as possible they are "Revised" by the Driver or Clerk (Our Bookmobile crew always consists of a Librarian, a Driver and one or two Clerks, excepting in rare instances when a Librarian and a Driver may go out alone to a stop that is not very busy or in an emergency when we are woefully short of staff) This revision is to see that the book card and pocket tally and to make sure that there are no obvious tears or scribbles or other damage The Clerk or Driver then shelves the books and they are ready for the next reader.

2 Three Ring Circus

Sometimes the Bookmobile crew at a busy school feels like the "Acts" of a three ring circus Children are coming in classes or committees with or without teachers (We *much* prefer it when the teachers come, for they know the children's reading abilities as we can never hope to), teachers may be choosing books from the adult collection for their personal reading, a remedial reading teacher may be asking our help in selecting books for her "Reluctant Readers" and a 3rd grades committee may need help (Of course all classess and committees come according to a very strict schedule and no two groups should ever be at the Bookmobile at the same time. But the succession of one class on the heels of another, keeps us very busy and active)

21 STORY TELLING

Then before we leave school, if we can squeeze it in, we like to go to a classroom and meet with a double class of sixty or seventy children and begin the magic words, "once upon a time", which carry the children off to enchanted lands We feel this story-telling serves three purposes: It builds up a pleasant feeling towards the Bookmobile visit in the children's minds, it shows them the good stories that are in the books waiting to be discovered, and it gives them a little more background in that they now are familiar with whatever fairy tale or myth or legend we have told them One principal of a country school we visit begged us to continue our story-telling at his school, saying it gave his shy, inexpressive children the experience of hearing oral English with words properly pronounced and the voice well pitched

3 New Bookmobile

So much for school visits, which is a large part but by no means all of our Bookmobile program Two Bookmobiles were mentioned earlier In 1957 a second Bookmobile was acquired, giving us a "Fleet" of two Bookmobiles The original one of 1935 had been replaced several times and at present we have a 1949 Gerstenslager Bookmobile on a Chevrolet chassis and a 1957 Pacific Body Builders Bookmobile on a Dodge chassis. Cost is always of importance, so let it be said that the Gerstenslager vehicle cost $ 9,200 in 1949, the Pacific Body Builders vehicle $ 17,400 in 1957 At present we have a new Bookmobile on order from the Pacific Body Builders and it will cost $ 21,500 It will have a few improved features but I imagine the main reason for the higher price over the one bought in 1957 is "Rising Costs". Too small a Bookmobile is certainly poor economy Public Library standards for California recommended that Bookmobiles to be practical should carry no less than 1,200 books The capacity of our Pacific Body Builders vehicle is 3,500 volumes and is a boon when serving our large schools

4 Bookmobile Naming Contest

Then the second Bookmobile was acquired, the need for names became apparent, for otherwise they would be designated as "The New Bookmobile" and "The Old Bookmobile", and this must be avoided, it was felt Accordingly a "Bookmobile Naming Contest" was held among the children of Oahu A book prize was offered and the winning name, which was given to the new Bookmobile, was "Holohold Akamai", good Hawaiian for "Wisdom on Wheels". The second prize was for the name "Tusitala" or "Teller of Tales", the Samoan name bestowed on Robert Louis Stevenson by the natives there when he went to live among them This name is proudly borne by our older Bookmobile A naming contest is such a happy activity for children—as well as such excellent publicity—that it seems a good plan for any Library to stage one when it acquires a Bookmobile

5 Ranganathan's Visit

It is high time to explain the occurrences which led to the writing of this brief description of Bookmobile work on the Island of Oahu in the Hawaiian Islands

When Dr S R Ranganathan, well-known Professor of Library Science in India, visited the Library of Hawaii some time ago, he observed our Bookmobile system and was much interested in it, asking all manner of penetrating questions about its working And then he asked that an article be written embodying all that we had discussed and more, touching on historical, statistical, and financial aspects, not forgetting the human interest side. It is that which this article attempts to do, from two standpoints—first, the Hawaiian Picture which at present is made up of two Bookmobiles but envisions, certainly, more at a not too distant date, and, secondly, the Indian Picture and the vast number of Bookmobiles—was it one thousand or five thousand?—which Dr Ranganathan hopes to see in operation there within the next twenty years

6 Advantages of Bookmobile

As I have made my own observations and read articles on Bookmobile work in the two years that I have been engaged in this branch work, the *Practicality* and the *Mobility* of this system of distributing books impressed me over and over again In contrast to building a branch library, the purchase of a Bookmobile has many advantages and only a few drawbacks A Bookmobile is less expensive than a branch building, first of all, secondly it can serve a far wider area (On this Island we drive as far as sixty miles some days to serve several community stops and a school or two) On the debit side, it remains at a place for a limited time only, whereas a branch is always available *but* to a much more limited clientele It seems to boil down to the question Do you want bread for all the people or an eight course dinner for a limited number?

61 Bookmobile Service Planned

The "Whys" and "Wherefores" of school stops have been given Community Bookmobile stops are somewhat different but just as basic a part of Bookmobile work Generally when Bookmobile service is being planned, certain country communities or populous neighborhood areas in a city are selected to use as trial or "Guinea Pig" stops. Word will go out via Radio, TV, and newepaper publicity that beginning on a certain date the Bookmobile will be at a certain spot (A supermarket, a post office, a church, a housing development, or a park are all likely places—wherever people will find it easy to get to) for half an hour, an hour, or more Another excellent form of publicity is to have small posters made listing the dates and hours that the Bookmobile will be at the particular stop and then ask the post office, supermarket, etc where the Bookmobile will stop to display the poster.

62 Scheduling

A brief "Detour" at this point to say how vital *Scheduling* is to the Bookmobile. It may be done in many ways The same Bookmobile may make school and community stops both, but if a library system has two Bookmobiles it is more practical to have one specialize in school stops and the one in community stops. Practical to have one specialize in school stops. Then, instead of dividing the children's books and the adult books in two equal parts, the vehicle going to schools can specialize in children's books, the one going to community stops in adult books That is our method at the library of Hawaii, though the division of books carried by the school Bookmobile is about 75 percent juvenile and 25 percent adult (we serve the teachers at schools and we do make a few community stops near schools where it is possible for us to stop by on our return to main library) By the same token, the percentage of books on Tusitala (The smaller Bookmobile which concentrates mainly on community stops) is 75 percent adult and 25 percent juvenile (Tusitala serves a few small schools and the adults who come to community stops frequently with picture books for their little children and sometimes books for their school children as well—hence juvenile books must be represented)

63 Demand for Service

"Guinea Pig" community stops have been mentioned Sometimes the "Guinea Pig" proves a success and the stop is a thriving one that grows rapidly with the first visitors bringing their friends and neighbours the next month (Our stops are made only once a month, alas ! though we hope some happy day to have enough books and vehicles and personnel to return to each school and community stop every two weeks Some Bookmobiles return once a week but we are willing to leave that for the far distant future !) On the other hand the Librarian may have misjudged the neighborhood interest in books and find the Bookmobile hardly patronized at a particular stop The only thing to do is to finish up the schedule as promised (We usually schedule four or six months ahead and publish dates for only that length of time) and then drop the stop and put a more promising one in its place Frequently a nearby community will request Bookmobile service when it comes close to them Such requests may come from civic leaders, Parent Teachers Association Officers, or simply a housewife who says that she and her neighbors are "Hungry" for books

64 Effect of Service

As someone has said, "Scheduling is a never-ending process" Change and flexibility are the way of life of a Bookmobile, for it is an experimental sort of work by its very nature Bookmobiles forge the way for branch libraries to develop in time. Let no one who likes to count on doing a certain thing at a certain time for an indefinite period go into Bookmobile work The poor creature would have a nervous collapse in her first six weeks on the Bookmobile. It is a field for young and the flexible. This is not to be interpreted as showing lack of appreciation of the branch Librarian who enjoys becoming a part of her branch neighborhood, serving on her community council and getting to know the families to the second and third generation. Such people perform one of the most valuable services permitted to any Librarian, but—they would probably not do their best on the Bookmobile !

7. Extension of Services

All of the four major islands in the State of Hawaii have Bookmobile service. Our Hawaii Library Association Journal for April, 1955, published articles on Library work on the neighbour islands and two interesting commentaries were made on Bookmobile work. Ann Hart, who was at that time Bookmobile Librarian on Maui, wrote, "Life on a Bookmobile in a city is interesting but I'm sure I shall never find it as interesting again after my Bookmobile life on Maui. Where else would I find such a variety of experiences both as a Librarian and as an individual ? It's true the service is much the same as on most other Bookmobiles in any city or country Library system throughout America. The basic needs and desires of the patrons are not more unusual than those of any other community. Yet the particular combination of people, their occupations, and their geographical locations make each day's Bookmobile trip completely different from the day before . . . some days take us to the windward side of the island, where we travel roads through dense bamboo forests past waterfalls, and along high cliffs to isolated schools. The books these children borrow from the Bookmobile, we know, will be read only in school, for they have no free time at home. Before and after school they work in their family taro patches—planting, weeding, and harvesting the crop."

7.1 GOOD DAY FOR ALL

Betsy Cunningham is now in our Library of Hawaii but when on Kauai she wrote a fine article which concluded, "Travelling with the Bookmobile is hard work but one of the most satisfying occupations of the Library. We who engage in this occupation look forward to seeing many friends in each school, and when they say 'Book day is good day for me', we echo in our hearts, 'Me, too !' ".

7.2 SERVICE IN ISLANDS

Nothing in print has come to light on Bookmobile practices on the "Big Island", which is the nickname of the Island of Hawaii, but the very size of their Islands (Four thousand square miles compared to our six hundred on Oahu) makes certain limitations to their Bookmobile set up. Where the Bookmobiles on the other three major islands serve all the population that is not close to a Branch Library, on the Big islands where the main library is in the one large city of Hilo (Population 25,000), the Bookmobile is limited to going only a distance from Hilo that can be reached in half a day or less, so that Bookmobile and staff can return to main the same day. They make their rounds of schools (community stops are added in the summer when the children cannot be reached at the schools) every two weeks and the Bookmobile is eagerly looked forward to

73 Collection

The vast majority of their collection is made up of juvenile and young adult books As is true on the island of Oahu, the Bookmobile on the Island of Hawaii observes National Children's Book Week in the fall and National Library Week in the spring with posters and book quizzes and all the interesting materials that are available from National Headquarters. At all the libraries in the State of Hawaii, the aim is to give as rich and deep a Library experience to Bookmobile borrowers as to regular borrowers, in so far as is possible with an agency that is available for only an hour or two once or twice a month

8 Experience for Staff

In our Library of Hawaii there is a pleasant and wise custom of scheduling each new staff member for a day's trip on the Bookmobile in order to learn what this phase of library work is like After the trip a brief report is made and these reports yield much in the way of first-hand observation From dozens of well-thought-out reports, here are some excerpts that give some sidelights

"It proved to be an interesting and enlightening experience, even though a tiring one It is very pleasant to start your day of work by driving out into the countryside Then, you are warmed by the thought that you are bringing books to children who might otherwise never have a chance to borrow library books I found it rather trying to have one also after the other, with not much change to talk to or to get to know any of the children Also, I began to have an attack of claustrophobia as the children crowded into the Bookmobile on all sides of me (The others told me that if I felt crowded in the large new Bookmobile, I should have worked in the old one !)."

"We had a schedule to meet which seemed to be carried out almost to the exact time planned I can see where a lot of thinking goes into planning a day's schedule Careful estimates also have to be made of supplies needed for each day's trip . I liked sitting up high in the book truck from the observation point of view . . to end this summary of my Bookmobile trip, I'd like to say that I was very impressed with my adventure on a Bookmobile."

"One patron commented, 'we are luckier than the people in town—our Library comes to us.' It was good to see people so happy It was good to see people share and recommend books. It was a good work that the librarians did, guiding people in selecting books."

"It's like a gold rush when they come in to select their books . . . it was like a hurricane passing through and I doubt if a coconut tree would have survived . . . I believe that the real value of the Bookmobile and the Library Period lies in the fact that it introduces books to children It's like a picnic to them and even if a child is not interested in reading in general and picks out his book reluctantly, he may slowly discover the whole new world of books

"The books were checked in and out with speed and ease The cooperation of the staff on the trip was marvelous I think a great deal of credit should go to the workers who make the trip daily This trip made me realize how much these monthly visits to the schools mean to the children A ninth grader came by the Bookmobile and asked, 'Is the Bookmobile open to all children ?' I answered, 'Sorry, it's for the seventh and eigth graders of Radford high only.' He replied, 'Can't you make an exception ?' So you can see there are a great many older children who are eager to use the Bookmobile, too "

"The next stop was at Paumalu, and I was properly forewarned of the popularity of the Bookmobile service at this station. Before Tusitala had manoeuvred a complete stop, housewives, babies, children, and dogs were at its doorsteps. Each household was represented with mothers collection of ten books and more, children of various ages, and books of neighbours who could not meet the Bookmobile this month Bookmobile day is a neighbourhood event here ! Books had been exchanged among the neighbours and this month's books were being earmarked for further borrowing among each other There was a friendly atmosphere at all the stops Everyone seemed at ease and courteous The close quarters in a Bookmobile induce a friendly and easy relationship between the patron and the librarian The Librarian is never more than two arm lengths away from anyone at all times so whatever book she recommends to one is heard by all with great interest This is most stimulating as almost every one will want to borrow and read it later on. Occasionally the patron would offer a book review of sorts with the same results the joys of a travelling library right at one's doorstep are many It just goes to prove that there cannot help but be a friendly and personal relationship between the Librarian and the public It was a most interesting trip from the standpoint of the Librarian's role as Bookmobile supervisor, the vehicle itself and its choice collection of books, and the much appreciated Library service rendered to the people in the less populated areas of our Islands"

"Could this long trip with just two stops justify itself ? To my surprise it more than proved its worth For a four-hour drive to and from, we made two 1-hour stops For our first stop we packed across from the Kanuku Band and Post office; in that hour business was so concentrated that at times it was impossible to go from one end of the Bookmobile to the other the turnover of books is impressive and we were busier than possible . the Bookmobile will certainly be a leading factor in bringing the Library to people who ordinarily would not be able to obtain reading material. Circulation figures will certainly rise for the extension department as the Bookmobile makes new contacts with communities which lack this service .Bookmobile work, however, is rather frustrating because there is such a small collection to work with, and the demand for certain types of books is so great."

"I do hope that the Bookmobile will be able to extend its services to the children in the 3rd grade or even 2nd in the future, because I feel that is the grade when one starts to read and if encouraged at an earlier age, they might do better in the future Perhaps when the Bookmobile extends its services to the adult community as well as the school, then the parents who use the Bookmobile, will become interested and carry their interest back to their children "

"I came to the conclusion that a Bookmobile Librarian needs to be a special type of person: rugged (To withstand the long rides between stops), with infinite patience (To cope with over-energetic children), and with an abundance of good humor (To see the lighter side of some trying situations) Besides all of this, the Bookmobile Librarian must like her work or all is lost !"

"Sometimes when an entire class came abroad looking for the same type of book for a book report I held each book aloft as I came to it and gave a quick resume of its contents and various students held up their hands for it—or asked if I had another copy or something similar "

"The Bookmobile can play a great part in the education of children in the rural areas However, more books and more help will be needed—and certainly a greater awareness on the part of the school and the teachers Some teachers did not try to help their students at all. One Librarian cannot help all the students—and many do need help it would be ideal if the Bookmobile could call once in two weeks instead of once in four weeks !"

"While travelling to Ben Parker School, I made it a point to watch the people's faces as we went slowly through town and I noticed that some of their faces lighted up when they saw the huge Bookmobile go by "

"It was a wonderful and satisfying feeling to see all the youngsters coming to the Bookmobile and picking out their books Some knew exactly what they wanted while others needed more time It was a shame to rush the children, but the time schedule had to be adhered to so that others could be accommodated "

"It was a shocking surprise for me when I saw the expression on people's faces as we stopped on our regular stations Books to these people were like food to some hungry starved animals As patrons entered the Bookmobile they would give you a happy greeting and start looking for books without wasting time. These patrons know they have a chance to widen their scope of knowledge and won't let a thing like this pass them by "

91 Literature on Bookmobile

May I refer our Indian friends who are interested in learning more about Bookmobile service to an excellent set of articles in the *American Library Asso-*

ciation bulletin from May, 1957 to January, 1958 The seven articles are written by as many libraries engaged in Bookmobile service and they wrote of cost, of scheduling, of service to schools and city areas and rural areas, and of a host of practical matters I dare say that no Librarian contemplating organizing a Bookmobile program could read these articles without great benefit—and neither could an experienced Bookmobile Librarian !

92 Gandhiji on Culture

One of the greatest of world figures, Mahatma Gandhi, has said, "I do not want my house to be walled in on all sides and my windows to be stuffed I want the cultures of all lands to be blown about my house, as freely as possible "

921 PUT INTO PRACTICE

As with many wise utterances, we can find an interpretation of this that fits our subject, for surely our Bookmobiles with their panels which open up to reveal rows of books are not rigidly walled I believe "The cultures of all lands blow about our (Bookmobile) house as freely as possible " for we carry a wide variety of precious volumes. On the children's shelves the *Iliad* of Homer, the *Fairy tales* of Anderson and Grimm, the wisdom of "The Banyan Deer", the imaginative delight of "The borrowers", and the reverence of "Their Search for God's ways of worship in the Orient" are all to be found And on the adult shelves the treasure is as great on a more mature level

93 Service in India

Henry Thiagaraj of Madras, an Indian friend at UN Headquarters in New York, sent us a "Unesco feature" report for September 7, 1959 in which there was a fine article by Harsimran Malik entitled "Books on Wheels in the Indian Plains" Through it we learned that the Delhi Public Library had one Bookmobile at that date and was planning another to serve the widespread capital city and the outlying towns of Bowana, Puth Khurd, Barwala, and Pahladpur It says in part, "The Bookmobile has become a welcome and popular institution It is one of the weekly events of the area Begun over three years ago with the assistance of Unesco, the extension service is a real part of the life of these villages as education and literacy advances in modern India, the Bookmobile is playing a vital part in that advance by making books more readily available to an ever-increasing number of people, old and young "

94 Two Proverbs

A friend of India and her people, is Mrs Ellen Watumull of Honolulu We discussed that matter of Dr Ranganathan's Bookmobile dream with her and she kindled to it, saying, "I am reminded of two of my husband Gobindram Watumull's favorite quotations One is a Chinese proverb, 'it is better to light a candle than to curse the darkness.' The other comes from India and expresses the philosophy with which they approach many of their problems—'The longest journey begins with a single step.'

95 Science in the New India

May I say for the staff of the Library of Hawaii, that our good wishes go to Dr S R Ranganathan and his colleagues as they plan for Bookmobile service for the New India If there is any way we in Hawaii can be of help, we should be honored to have them call on us

CHAPTER M5

Co-operation in Public Libraries

GERTRUD GELDENBLOM

0 Concept of a Public Library

IN the English-speaking world a library, in which any one can read books and borrow them and in which everybody can receive information about books and other materials, bears the extra appellation "public" affixed to it. By this an extra emphasis is put on it. The appellation "Public Library" means an institution which supplies to any citizen according to his needs and circumstances the values to be obtained through unrestricted access to books, periodicals, newspapers, notes, gramophone records and other like materials.[1]

Whatever be the actual designation of such an institution (in Germany owing to historical reasons various names have been given to such institutions like Public Library, Folk Library, City Library, Book Hall, Reading Hall, etc), the concept of "Public Library" always means a library for everybody or an Information Centre for everybody. Herein lies the public character of the institution, and herein the basis for co-operation. Whatever be the mode of their functioning, co-operation is essential for all libraries, whether they be fully developed, semi-developed, or underdeveloped. When fully equipped libraries give up such cooperation, they cease developing. If the libraries or the persons in charge would foster the development of men—and that is their true function—they must preserve what is old and permanent, discover what is new and anticipate what floats in air; moreover, they must be enthusiastic and be perpetually on the active move forward. Though co-operation is many-sided, certain general features for this may well be laid down. From the library point of view, public work through co-operation is at the apex of its activity. This implies that the existence and activities of the library should always be broadly public. Now this openness to the public implies a number of directions and principles—both national and international. In the foreword to the handbook *Germany uses libraries*[2] published by the Unesco Commission, it has been clearly stated that public libraries should never rear poorly in the dark corners, but should be provided with a free and bright place right in the lime light.

1 Need for Co-operation

A whole chapter of this handbook discusses the place of a library in cultural life and emphasises that libraries cannot remain isolated Emphasis is laid on how in social, political, and other fields they can fulfil their tasks, only when contact is maintained with officials, governmental departments, cultural institutions, press, radio, film and television (page 58) Development today can take place not in vacuum but in adjustment to and overcoming the conditions of our society—society en masse The preconditions necessary for this is co-ordination among the libraries, and such a co-ordination demands mutual co-operation.

2 Library System

In the recommendations of the Committee for Education we also read "In urban and rural areas the libraries should not be isolated from one another in their management but should form parts of a well-organised library system, in which equilibrium is established among the central libraries, municipal libraries and small private libraries, and among the libraries for adults, youths and children". (Page 68) This point of view is advocated by L R McColvin who under the auspices of the International Federation of Library Association[3] has prepared a memorandum on the development of public library services In this report there is a notable sentence, in which the public character of a Public Library is regarded as an essential feature There the public is also called upon to feel responsible for the proper upkeep of libraries. But it is only continuous mutual co-operation between the parties that guarantees public activity

3 Public Character

Public character rests not only on the library as an institution but also on the consciousness of the librarian This specialist always finds himself involved in public dealings with the uses of his library For with the public he comes in contact in various ways In what follows we shall talk of these contacts

31 FREE LENDING OF BOOKS

He must, as a matter of duty, be concerned with circles and personalities that crystallise opinions, should be acquainted with the book companies and should explore the possibilities of extensive mutual co-operation Such a co-operation is aimed at creating an atmosphere of trust and sympathy through the art of talking with a fellowman, groups and circles and of tact in dealing with partners Free lending of book creates opportunities for such wide direct contact that it is superfluous to talk about it. Mr L R McColvin has worked out a thesis on this fact and this has general significance for any country whatsoever. The peculiarities of different situations can be discussed in this connection. It has been said in the memorandum that it is important to take account of the needs and capabilities of all kinds of readers

32 SELECTION OF BOOKS

The decisive matter is the selection of the books to be acquired, this has become difficult owing to the vast scale of annual book production This is not just confined to the multifarious literature of fiction The demands of the present require a strict differentiation among the technical fields, as borrowing in this field has expanded so much as to constitute about 50% of the total number of books lent out This in its turn is related to the increasing scale of education. Large-scale school education and widening of the world of profession and learning influence the book stock

33 RANGANATHAN'S PLEA

These tendencies are served not by technical fields but also by information sections, the assistance of which satisfies everybody as regards his own concern Dr S R Ranganathan in his article in *Importance of a library in modern times*[4] gives a beautiful picture of "Books as heralds of light" In this article he deals systematically with all the requirements and possibilities of a modern library

34 PUBLIC LIBRARIAN

The basic demand of a public librarian is not only literary interest along with an understanding about the composition and conspectus of the book stock but also a permanent, selfless, intensive participation in the life of all men It is only when this is so that he becomes effective publicly Along with these qualities he must also have the objectivity of a professional man, even when he distributes books that counter his own views Objectivity is one of the first premises in the conduct of public life

4 Public Library Standards

Mr McColvin in his *Standards of public library service*[5] has given a sufficient amount of instruction and experiences with regard to book stock and its relation to population, business, etc Further possibilities lie embedded in the very structure of the library. It must have a direction that constitutes external and internal unity. Even in externals there are world-wide implications in a library To the International Federation of Library Associations held in Malmo/Lund in 1960, Ingeborg Heintze has submitted a survey of the architectural principles of library building The three Fs of modern architecture, viz, functionality, flexibility and friendliness, can be applied in the building of a library as a living organism which must conform to changing society. Moreover, these qualities are neither time-bound nor space-bound and can be altered according to geographical and climatic factors The libraries, that we plan now, are meant for a society to come All thought must be given while planning the site, the shape, finishing and decorations of all kinds, for which innumerable opportunities exist. In the light of its entire structure a library can be made to work as a symbol in all its external signs by day and night, with names, lighted signs, paintings, show cases, etc to be recognised and admitted as a spiritual centre

5 Personal and Group Contacts

Thus the view that a library is meant only for lending books happens to be supplanted Reading hours for children, youth, and adults, discourses and study groups further group-contact Study circles like those found in Sweden promote spiritual exchanges Relation with schools and institutions and adult education for all age-groups stimulate such contacts For their teaching work persons in charge of conducting class take recourse in the first instance, to a library Such a contact is extended through relations with teachers' training centres and with training centres for nurses, for professions, etc (for example with kindergarten teachers, social workers etc.) Further contacts can be established with homes and establishments, the members of which do not look to libraries Hospitals, prisons (if libraries do not actually exist at these places), fire brigades, firms and other establishments are examples in point Unlimited are the possibilities of contact

51 Library Publicity

Besides these direct and personal contacts, there are possibilities of indirect contacts with the already existing members of the community of readers and library users Preparation of catalogues and bulletins occupies the first place in displaying the book holdings according to particular subjects and with annotation Thus every reader has an access to the sources he requires and thus he feels encouraged in independence and self-education Such things artistically designed, strongly influence the users of the library The attraction for reading is acutely felt, when a catalogue contains additional hints on the literature This has been amply proved true in the case of modern lyrics With the help of lists of books meant for different purposes, the librarian may face the actual occasion and make it living, be these actual occasions political or library-oriented, artistic or commemorative, festive or seasonal

52 Contact with other Bodies

Contacts may also be established with various public functions like youth book week, authors' conference, Christmas book exhibitions, itinerant exhibiions for schools, nurseries, kindergartens, guardians' meetings, etc. Specially prepared booklists may serve as suggestion lists for book holdings in children's homes, school libraries, youth corners, etc.

53 Prize Contests

Competitions and prize contests for youth can be arranged For example, on subjects like "I and my book", or like "my favourite book" contests may be held or posters pasted, the possibilities in this line are manifold There can be no end to the imagination of the librarian in this respect An individual tyle can always be worked out. Moreover, such contests might be synchronised with some cultural event

6 Audio Visual Materials

It should be pointed out in this connection that sporadic attempts in these lines would not bear any fruit and that for concrete results these must be made permanent features Attractions to public libraries lie inherently hidden, and the unexploited possibilities must be realised by resourceful experts with ncreasing efforts and that particularly in our times when there are various actors for diversion and the mass media like film, radio and television rope n a large number of men It is self-evident that the libraries could exploit these mass media Whatever the way the libraries move, the choice and nature of all the possible examples of 'contacts' is dependent on the existing ituation. Such 'contact' may be established by individual persons or by a eam of persons

7 "Check Book" of Ranganathan

Nevertheless such activities and their effectiveness succeed or fail according o the personality of the librarian, that is, according to his ability and readiness or such contacts It is the librarian who bears the ultimate spiritual responsibility for this. The five pages of the "cheque book" that contains the principles of library work can be utilised effectively only in this way This was the "cheque book" that was presented to the Congress of the German public librarians in Berlin in 1956 It is as a token of this friendly present delivered to us that we greet and thank our friend Prof Ranganathan, the motto of whose works is contained in the remarkable words "Light, knowledge and wisdom in place of darkness, ignorance and intolerance".

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CHAPTER M6

Co-operation in Indo-Pakistan Librarianship

A M ABDUL HUQ

0 Indo-Pakistan Co-operation

NEVER before in history have nations been so willing to share with each other their knowledge and experience. Progress in this age, no matter what may be the field, is greatly dependent on this factor. In Indo-Pakistan librarianship, however, there has been very little co-operation. So far we have only been co-participants in seminars and conferences organised by a third party like UNESCO or AFLA. There is practically nothing that we have done on our own to promote goodwill and to share our experiences. Many problems are common to us and naturally we could look for solutions together. This will bring operational economy and effective results.

1 Oriental Names

One problem that immediately comes to mind suggesting joint solution is that of Oriental names. Problems with Muslim names are problems not only of Pakistani cataloguers but also of their Indian counterparts. In fact, in case of the latter it may be a much more serious problem since they may generally lack a special knowledge of Muslim culture and a familiarity with the complexities of such names. (The same may be equally true of Pakistani cataloguers dealing with Hindu names). In discussing about the problems arising out of Muslim names, Dr Ranganathan writes, "I think there is even a greater scope for research in Muslim names. In addition to the intrinsic complexity of such names, there seem to be also some special features characterising Muslim names of different nationalities such as Spanish, Moorish, Turkish, Egyptian, Arabian, Persian, Afghan and Indian. The whole problem is bristling with difficulties and uncertainties. The present practice in libraries can at best be described as 'drifting'." It is in the interest of both India and Pakistan that we frame some standard code for dealing with Muslim names. The same way problems in regard to Hindu names and their solutions are of mutual interest. In the IFLA conference to be held in Paris in October, Oriental names will come up for discussion. Both India and Pakistan are preparing draft cataloguing rules about Hindu and Muslim names respectively for presentation to this conference It would have been ideal to exchange views on this matter since each one of us is seriously interested in the views expressed by the other. However, the code that may come out of the IFLA conference will be required to be revised constantly and therefore the need for continuous cooperation on this matter between these two countries is obvious. Besides this there are also other cataloguing problems confronting us especially in-languages common to both of us We certainly could collaborate on all such matters. Let us take a special note of Dr Ranganathan's emphasis on "agreement between different national groups belonging to the same linguistic family" while devising cataloguing code

2 Classification

Our problems in classification are similar and the need for expansion of most of the classification schemes to suit our requirements is just the same, although the emphasis in certain areas may slightly differ. There is no reason why we could not join our hands together to bring about necessary expansions of the schemes in most use in India and Pakistan Dr Ranganathan's observation on this is penetrating He says, "Classification reaches its greatest value in communication in the sphere of intellectual team work"

3 Acquisition

Acquisition of Indian Publications in Pakistani libraries and vice versa is well-nigh impossible under existing conditions Yet how badly we need each others publications Fundamental research in both the countries will continue to be a problem without acquiring each others works Here also we could jointly try to work out some solution and if nothing else is possible we could at least agree to exchange publications Perhaps, we also could share the treasures in each others libraries This could be arranged for in two ways One would be inter-library loan facilities, the other would be getting valuable documents reproduced and exchanging them

4 Documentation and Bibliography

Cooperation in documentation and in bibliography is a necessity in this age of prolific publishing activity To quote again from the wisdom of Dr Ranganathan, "Taking the world as a whole the mental advancement will be very much greater if there is cooperation between nations in the international exchange and lending of reading materials and in the digesting and preparation of information for service. International economy of this sort generally implies also national economy Moreover for certain classes of bibliographical service a nation in too small a unit in which the overhead charges bear an undue proportion to the service needed in actuality " Thus both India and Pakistan would gain by joining in cooperative ventures of this sort.

5 Library Education

Both in India and in Pakistan, training of library workers is a serious problem We do not have adequate facilities for trainings; we lack in resources. In the matter of programming and in revising courses we could lean on each other. In preparing text materials, we also could take each others help. Perhaps, text materials prepared jointly with due emphasis on the needs of both the countries would ensure a better appeal and a wider market.

6 Standards

Library standards and work measures are yet to be satisfactorily developed in both of these countries. Standards of one country will be a helpful guide to another especially when circumstances are more or less similar Even after standards are well developed, there will always be need for revision and for studying growth in both the places An examination of the results and their comparative evaluation will furnish enough clues for furthering progress.

7 Preservation of Materials

Preservation of printed materials in tropical countries is a serious problem. The danger of damage through climatic conditions, fire and flood and by insects of thousands of species is much more severe here than in temperate climate Research that has been done in Western countries is of little practical value to us. It is, therefore, highly desirable that we launch a joint research project to save our printed literature for the posterity

8 Steps to be taken

The areas discussed above are only the major ones, and certainly there is room for cooperation in each and every field of librarianship The immediate need is to have the ball rolling Perhaps, the Indian Library Association and the Pakistan Library Association could explore the possibilities of such co-operation and take positive steps to implement them The annual conferences of these associations could be the venue for initial discussion of this matter and later this could be taken up in joint ILA-PLA sessions or in some joint Indo-Pak seminar

CHAPTER M7

A Farmington Plan for Pakistan

M SIDDIQ KHAN

0 Library Co-operation

ALL librarians of today are quite familiar with the working of inter-library cooperation and it has been estimated by Esterquest that possibly there is more discussion of and writing about inter-library cooperation than any other aspect of library service. The Farmington Plan, which is the system of co-operative book procurement by 62 libraries in the United States for the purpose of covering publications from 17 European and a number of other countries for the purpose of research on subject of libraries of America, is held therefore as a household word with librarians in all parts of the world.

In an attempt to assist the Pakistani libraries to make up for their late birth and growth specially in the context of their difficult procurement programmes of foreign materials, it is worthwhile considering whether a cooperative book purchase scheme in the nature of the Farmington Plan would be of some value and assistance to them. Starting with an almost blank state, not having claimed or received the share of the national collections of books of pre-Partition India, Pakistani libraries are in a sorely handicapped position. Except in two or three major libraries of the country, e.g., the Punjab University Library, the Punjab Public Library, both established in the 1860s the stock of books which were published earlier than the first part of the 20th century, are very few indeed. Even the Dacca University Library, the greatest in Pakistan so far, being a comparatively young one, having been established in 1931, has only a small collection of earlier works. New books can be acquired at a price—but no price can bring many of the older volumes.

Even in the case of 20th century and later publications, the Pakistani libraries, university, research, departmental and others, are not happy. One reason for this is that the number of libraries is much too small in proportion to the population and, therefore, to the potential body of readers. Pakistan is a fast developing state which is making rapid headway in the fields of administration, education, technology and research and, this is, therefore, all the more reason why the manifest inadequacy of books and journals heads of the Pakistan's libraries has to be remedied.

1 Problem of Book Procurement

In addition to the reasons already mentioned above, there are other extraneous reasons also which make it difficult for these libraries to keep pace with, firstly, the reader-demands for materials upon them and, secondly, the huge spate of valuable reading materials being poured out all over the world As in India, the question of foreign exchange has, until lately, hampered large-scale book procurement by the major libraries. Then again, the rigours of rules and regulations governing import and remittance of prices and subscriptions have affected this aspect of reader's service in Pakistani libraries considerably Although the position has improved markedly over the last two years, it is yet obvious that there should be some bold planning supported by extra-ordinary measures to recoup in large measure the lost ground in book procurement The obvious plan that suggests itself is a project on a model of the Farmington Plan which is very close to some cooperative book purchase schemes operating in Great Britain

2 Main Objective

The main objective of the plan for Pakistan should be that a very wide coverage of old and new printed books and journals should be available at least in one of the major libraries of the country and this coupled with an efficient system of inter-library cooperation would allow better reader's service as far as the provision of published materials go without straining the present or possibly augmented library budgets. The very nature of cooperative book procurement makes it fundamentally suitable for the programmes of advanced and research libraries and the materials to be covered would be, usually, advanced grade reading—mainly research and specialized materials from foreign countries

21 FINANCIAL BENEFIT

The first and obvious benefit of the introduction of such a project would be financial since the overall book-purchase budgets of Pakistani libraries at present, are on the modest side While the stretching of every penny would be undoubtelly welcome, yet without adding to the load to the state or the tax payer, the array of reading materials for readers in these types of libraries would be greatly augmented

22 ACQUISITION

A second advantage would be that the collection of library materials would increase enormously in a manner which would not have been possible by individual library efforts.

23 SUBJECT SPECIALISATION

In addition subject specialists will have much great facilities for the subject specialisation of materials as the basic aim of the proposed agreement

24 HIGHER EDUCATION

The scheme will help the growth of more understanding and friendship among the libraries, educationists, research workers and the like for the greater development of the country, particularly in the sphere of higher education.

3 Effect of Political Geography

One great difficulty, however, that faces the planning and implementation of a project on the Farmington model is the fact that geographically Pakistan is a unique territory divided into two parts with over 1,500 miles of alien country in between This wide gap is unbridgeable for practical purposes of inter-library cooperation, for even though postal requests and despatches of wanted items on such a basis are possible, these are bound to be slow and uncertain in operation with the attendant risk of loss or damage in transit Inter-wing inter-lending on the grand scale would therefore, be vitiated to a great extent and the major advantages and fruits of cooperation would be nullified Therefore, at the very outset this fact is to be recognised and a bifurcated scheme of cooperation planned—for the two provinces of Pakistan It would be possible, in case of very badly needed and more uncommon works which could be sent by post to practise inter-lending between libraries of the two wings on a higher tier, the national level Of course, it goes without saying that invocation the protection given by registration and or insurance of works, should be the universal rule rather than the exception

4 Tentative Suggestions

41 EAST PAKISTAN

I do not propose to go into minute details of the cooperative project but I do feel that some tentative suggestions may be of some value First of all, about the possibilities of cooperation in East Pakistan, if a Regional Library Bureau is set up for the Eastern Province, it is obvious that membership must be restricted to the major academic, research and departmental libraries Public libraries as such, excepting the yet-undeveloped although potentially promising East Pakistan Central Public Library, do not exist in their full-fledged form in East Pakistan. The university libraries at Dacca and Rajshahi will have to be the main protagonists of the scheme, although the Medical College libraries and other libraries like those of the Engineering and Agricultural Universities and the increasing number of special and research libraries will also play their parts in the scheme While it cannot be said that each participant library in such an organization would be equally interested in the various subject-fields which would be covered by its operation, yet somehow they would have to gather together as pieces of a jig-saw-puzzle and form a compact unit However, the discordant elements in the East Pakistan library scene would be the existence of about a hundred college libraries, thousands of school libraries most of which exist actually more on paper than otherwise and local municipality-supported or subscription libraries posing as public libraries. It would be difficult and even impossible to fit these in the Farmington Plan for East Pakistan for their state of organization is poor, their demands almost nil and their capacity equally so

Whereas the departments of the universities, the medical colleges, the learned and scientific institutions and organizations and the government departmental libraries operate on more or less one level with subject ranges fringing each other's, the college, school and public libraries of East Pakistan operate on a much lower level. Yet it would perhaps be possible to have a two-tiered project in East Pakistan for the benefit of college libraries alone in which case the university libraries would have to cater for undergraduate readers also and thereby increase their financial and service commitments which, as far as one can visualise at present, cannot be honoured easily in practice

42 West Pakistan

In the case of West Pakistan the spheres of cooperation could be greater and three or more parallel schemes or one three-tiered scheme could be run simultaneously The reasons for the comparative improvement in situation here may first be studied

The existence of well stocked university and public libraries coupled with that of a good number of library associations indicates how much the people of West Pakistan are conscious of the utility of library service This is partly because the library movement was started earlier in that wing of Pakistan and therefore, naturally, the proposal for cooperation in the purchase of library materials is bound to have greater support there and if a scheme can be mooted and implemented it might work better There this is because the Western wing of Pakistan is, vis-a-vis East Pakistan, in a very advantageous position in view of the fact that all its geographical units and the centres of learning including industrial and technological areas are closely linked together by an efficient system of communication by road, rail and air. Inter-library loans, which are the part and parcel of cooperative purchase, when introduced, may improve the availability of materials postal and air services ensuring expedition in despatch and receipt of requested and wanted items. But East Pakistan, being a riverine province, lacks adequate and satisfactory links by road and rail and also by air.

5 Working of the Scheme

How the scheme will work is the crux of the problem The existing libraries fall in three or four major categories—academic (university and institutional), public, research and Government or departmental. So far as subject specialisation of materials is concerned the university libraries, the research libraries and the libraries of professional and technical colleges (like the Agricultural and Engineering University and College, Medical College and School, Law College Libraries, etc should come to an agreement with the mental reservation that the university libraries will also have to cater to the reading needs of the undergraduate students besides the individual subject-field allocated to each library by the scheme

The College libraries which number about 90 and are more developed in the province of West Pakistan could easily form a separate bureau for cooperation among themselves while the public libraries and the Government Departmental libraries should form a separate association for cooperation As a result of these groupings, the Government, which ultimately must take the initiative in a country like ours will have to directly or indirectly take part in the development of public libraries in the greater interest of the general public

In the fitness of things, there should be two national libraries in Pakistan, one in East Pakistan and the other in the West As the two parts of the country are set apart from each other by great distance, both the national libraries should possess duplicate materials of basic importance The national libraries when both are constituted, may be the suitable co-ordinating hubs of the cooperative scheme maintaining for union catalogues and controlling inter-lending in both wings

The constitution of twin national libraries coupled with the various implementations of regional schemes of cooperation as proposed in this paper may achieve wonders in the fields of dissemination of learning and the spread of higher education and research

Agreements among the libraries of East and West Pakistani universities can be made with the same object to subject specialisation in library materials, and possibly after several years of successful, if experimental, operation the area of the scheme could be expanded insofar as libraries of the colleges may be included in the scheme

This might be facilitated by the raising of the syllabuses and tasndards of teaching of the colleges, but this topic need not be discussed further in this paper Under the scheme a fixed amount of money should be spent by each participating library on the procurement of necessary materials in the subject-fields allocated to it and this expenditure should be provided for, even as a special item, in its Annual Budgets. Where there is no existing specialisation in limited fields by individual libraries, this should be encouraged and started. For example the libraries of the Dacca and Rajshahi Universities in East Pakistan could purchase books, after meeting the basic demands of their own readers, the subjects allocated to each would of course, say, include all about East Pakistan or even Bengal. In course of time these libraries would be able to build up formidable specialized collections in their respective subject-fields Again the technical and special libraries like those of the Engineering University at Dacca and the newly-established Agricultural University Library at Mymensingh, and the Medical and the Law Colleges in East Pakistan could concentrate in purchasing items in their respective subject-fields, the responsibility of purchasing books on other subjects being divided out among other participant libraries in the Project.

6 Reading Materials

The reading materials thus obtained or to be obtained would obviously be available on inter-library loan which will necessarily develop fully and function efficiently when the cooperative book purchase scheme begins to operate There should be provision for union catalogues at strategic points in libraries chosen for their accessibility and ability to build and maintain such catalogue These services could be augmented amply by a national bibliography which would indicate the progress of publications within the country

In the first instance the subjects to be covered under the cooperative book procurement scheme should be limited keeping financial and other concrete problems in view Later, the scheme may be expanded to cover all the subject-fields as covered, say, by the Dewey classification So far as languages is concerned, publications of English, Bengali, Urdu and possibly Arabic should be given priority in that order

7 Cooperation of Librarians

Some questions will arise at the beginning One of these is that whether the librarians of all colleges mentioned, would be willing or able to cooperate as most of them are without adequate budgets and trained librarians with vision Most of them, as well as their authorities, they stand constituted now, may hardly appreciate the utility of such cooperation unless they are educated and inured to the idea They are yet in rudimentary stage and have to build up a good catalogue and introduce the other elementary features of reader's service.

8 Healthy Cooperation

In spite of all these preliminary difficulties in the way, the cooperative scheme may become successful because we can expect more materials in the different subject fields which naturally will not be possible to acquire single-handed by a library with its limited resources. Cooperation exists in a rudimentary form in Pakistan on library-to-library basis It is growing healthily It now requires to be formalised, co-ordinated and controlled After such a formal co-ordinated basis has been achieved there will be no difficulties in introducing the cooperative procurement idea The time is ripe. Who among the librarians of Pakistan will dream and dare ?

CHAPTER M8

Public Library and the Development of its Purpose

ANIS KHURSHID

0 Value of Books

"WITHOUT books, God is silent, justice dormant, natural science at a stand, philosophy lame, letters dumb, and all things involved in Cimmerian Darkness" —so wrote Thomas Bartholin, a Danish librarian in 1672.[1]

But books by themselves fail to serve any purpose unless they are put into action. Herein, therefore, arises the need for providing a channel through which such knowledge as are contained in books may be spread widely. And it is a library which can provide such a channel in promoting the book culture. It also fosters "idealism" and strengthens "the struggling aspirations of the human spirit"[2]. The place it provides for reading, the material and the equipment to handle and make them accessible and the trained personnel to manage the total operation in a library bring about the awakening of thought and the progress of ideas.

1 Concept of a Public Library

A Public Library, romantically called, a "People's University," has, however, a long history of desparate struggles in its attempts to assume a dynamic role in the society. Very recently a feature article on *Library* was published in one of the leading daily newspapers of Urdu in Pakistan. The author, a teenager, concludes the feature by saying, "And we were all beaten because we had built up a library."[3] How truthfully does it spell out the fate of the promoters of the public library movement.

11 FIRST STAGE

The public library, despite such heartbreaking failures, has managed to develop side by side with the progress of democratic ideas. The early public libraries were vague in their aims. At first they were conceived and developed for the few. The underlying objective for the establishment of such services was preservation of printed materials as something very sacred because reading then was considered a religious duty Libraries were attached to monasteries and access to the printed words was restricted to "the few". "Here, then, are the treasures of the monastery, here are riches feeding the soul with the sweatness of heavenly life"—says the catalogue of the monastic library of the year 831 [4] Books were then considered spiritual weapons, and their writing as such was done by monks in a secluded place within the monastery. "The strictest rules were imposed within these rooms, and in order to preserve the valuable manuscripts which they contained, artificial light was entirely forbidden. The Scriptoriums were out of bounds to everyone except scribes and higher monastic officers . Scribes were forbidden to make any alterations in the texts even when these contained obvious errors In the early days no one was permitted to speak If a scribe needed a book he would move his hands in a gesture of turning over pages "[5]

12 Second Stage

121 GREAT BRITAIN

The mid-nineteenth century, however, saw the beginning of the support for extending library services to the less favoured classes of people This was the result of the growing poverty, crime and wickedness among the working class. They were enticed to public-houses in the absence of any recreational media or a place where they could spend their leisure time profitably This drunkenness, therefore, was causing much concern and as a rescue-motive, public library began to be talked about as a place of counter-attraction to the other pursuits with which the people were obsessed Significantly, however, the pioneers of this movement in England, Edwards and Ewart, both asserted educational value of public libraries but its other supporters held quite a different view Edward James said at the opening of a Branch of the Manchester Public Libraries "The more they could divert the attention of the people of this country from the public-houses, gin-shops, beer-shops, and places of that description, by opening such institutions as free libraries, and enable them to cultivate their minds, the more effectively would they diminish and put an end to the degrading vice of drunkenness, which now brought about so much misery, wretchedness, and crime "[6] Another point of view which prompted the support of industrialists was the concern caused by the increasing circulation of socialist literature amongst their labourers. The provision of public libraries was, therefore, considered as a means to check up reading of revolutionary books Yet, there was another group of religious men who saw in free public library, "one manifestation of the hope that religion could be furthered "[7]

122 DEMAND FOR LIBRARIES

However, moral improvement was for a long time the basis of a free library in England. But there did not appear to have existed any demand for free libraries and they were almost thrust upon the people by the upper-class supporters of this movement due to their "spirit of generosity and interest in the well-being of their less fortunate fellow-men "[8] "Whether all the upper-class supporters of the library cause were quite unselfish . may be questioned . . . Material prospect was to some degree the motive of business man "[9]

123 UNITED STATES

In the same period public libraries in America were developing under the generous support of philanthropists Public support in their case was, however, readily available The American public libraries were thus growing with a popular demand abetted by private philanthrophy and in contrast to English libraries, the intellectual aspect of the functions of the public library was more emphasised than the moral and social ones The Massachusetts Library Bill (1851) in its preamable enjoins the library's function, saying that there is no way in which "universal diffusion of knowledge among the people (which is) highly conducive to the preservation of their freedom . intellectual and moral advancement can be done so effectively, conveniently and economically as by the formation, increase and perpetuation of public libraries "[10]

124 OTHER FACTORS

"The century beginning with 1848 has been the century of the common man" [11] Enlargement of franchise and universal education all the more necessitated that every elector should possess a knowledge to be able to cast his vote objectively The fact that libraries were not used (in England) more effectively to gain that knowledge may be attributed to the existence of other organizations which had deliberately political or sectarian aims, seeking almost exclusively the political maturity of their members "[12]

In the years following the World War I, the public libraries in England, however, received due recognition and began to be considered as part of the educational equipment of the country The 1927 *Public libraries report*[13] is, in fact, a turning point in the public library movement of that country.

2 Social Institution

The public library thus has proved to be a truly flexible social institution which can face the prevalent problems and attack them vigorously in collaboration with other agencies to the advantage of the community at large The public library which was once regarded as a charitable institution for the poor, is now potentially accessible to all, rich and poor The modern attitude of a public library is to carry its message to the people who are unaware of its services This change has been the result of the publication of a number of documents, outlining its functions, based on the assessment of the public library services

Amongst them are the two statements of the purposes of public libraries issued by ALA[14] and the UNESCO [15]

Yet another important document, the US Public library inquiry, stresses the need for a change in the "intensity, the duration and even the nature of their (public librarians) services so that they will contribute directly to the solution of the crucial problems of our time."[16]

3 Media of Communication

This statement requires a careful study in the light of the development of major media of communications, viz movies, radio and television. According to a survey of the use of communication media in America, "book reading is most limited in terms of total population Almost everybody listens to the radio, but only one person in four reads a book a month."[17] Thus the "communication revolution" has greatly affected and will continue to affect the growth of public libraries in the "recreational area of communication but will probably do little to compete with the public library in its provision of 'serious' and permanent material "[18] Since books demand active interest, people tend to be easily attracted to the three popular media, sound, vision, radio and cinema, for their recreation but "in spite of the huge volume and the great reach of the commercial agencies of public communications their actual effect on opinion, attitude, and belief, as well as on factual knowledge is limited . . The more decisive influences on motivation, belief, and attitude still seem to be within the realm of more direct and intimate communication, including the intensive relationship of family and occupational groups and of organized education "[19]

4 Ranganathan's Laws

It is to this end that the *Public library inquiry* has called attention This change in emphasis, however, does not mean that a public library should neglect its primary responsibility of providing books but it requires a more direct and aggressive approach to Ranganathan's Second and Third Laws of Library Science Every reader his book and every book its reader [20] "Books are for use", says the first law of Library Science [21] It is, therefore, all the more necessary that every book which is judiciously selected in relation to the needs and problems of a community should have its potential reader. It is then alone that the message contained in books would influence the shaping of better and well-informed citizens

5 Extension Work

Extension work in libraries is designed to meet this purpose, viz stimulating demand for reading books. And this activity, according to Ranganathan, is "an attempt to bring the library into a social centre whose function is the encouragement of reading"[22] "The value of a library depends upon how much and how well it is used Whether a library service is new or long established there will always be some people few or many—who for one reason or another do not use it at all, and most of those who do use a library can be helped and encouraged in various ways to use it to better purpose Non-use arises chiefly for three causes—ignorance of service, prejudices or misconceptions and the absence of desire to use books" [23]

51 PUBLICITY

To dispel this apathy and to stimulate reading interest among the public, librarians felt the necessity to publicize their services. But in the year 1852, when for the first time lectures were delivered to encourage members of the public to use Manchester Public Library Services, even such a library stalwart as Edward Edwards was not favourably disposed to this function of the Library fearing that this would interfere with its ordinary routines [24] This view is still held by a number of librarians "Librarians should not go into the highways and byways beating a drum in the name of culture," thus said a Southern States Librarian in America [25] Librarians in Europe also do not subscribe to the idea of "selling library services" To put in the words of Munthe, "Library advertising in newspapers, street cars, movie theatres and on billboards and posters would in Europe end up by defeating its own purpose Are we to support a library that has to force its service on people? would be the immediate reaction of the ordinary taxpaying citizens"[26]

52 CATEGORIES OF EXTENSION WORK

The movement for the promotion of extension work, however, continued to grow. "Not only lectures but readings, exhibitions, play readings, adult education classes, wireless, discussion groups, Brain Trusts and other things have all been added to the list of activities of which a public library may be expected to foster"[27] During the economic depression of the thirties, this extension activity was further enlarged to include services and counselling to the adult education agencies and community groups in America The Commission on the "Library and Adult Education", appointed by the ALA (1926) felt the need that organized and more adequate library service to the other organizations engaged in adult education should be the responsibility of the libraries [28] In the decades following this report, the emphasis was chiefly on library service to individuals, gradually the emphasis changed to services to groups

The reasons for providing services to groups are 1 to fill an expressed or felt need, 2 to reach individuals through groups, 3 personal contacts, 4 to help group to achieve its educational objectives, and 5 to stimulate use of library materials[29] This change on emphasis is designed to reach the individuals who do not make use of its services at all.

6 Prejudices

According to a survey in America it was revealed that the library serves a small clientele of "culturally alert" members of the community[30] Therefore, this service to group was considered to be an effective way to encourage use of library among the apathetic reading public But in countries like Pakistan where public library services are yet to develop, the problem is more aggravated in the absence of philanthrophists like Carnegie And any public support for the promotion of this cause would not be available till ignorant prejudices are prevalent These prejudices which do arise as a result of the common belief that the library is provided for particular groups or social classes or with limited objectives—educational, political or religious—are therefore to be removed first

7 Ranganathan's Approach

The extension work in a public library with emphasis on its service to organized groups and agencies engaged in adult education can, therefore, best solve the problem of dispelling the ignorant prejudices, which now exist in Pakistan Our public libraries, therefore, need a radical change in their approach to the problem According to Dr S R Ranganathan, the extension work in our libraries should be enlarged to include

1 Institution of "reading system" by arranging to have books read to the group of illiterates,
2 Organization of reading groups, books discussion programmes,
3 Holding public lectures of local or topical interest followed by the showing of slides or movie pictures,
4 Preparation and distribution of select book-list on the subject of the talk,
5 Display and exhibition of books on the topic of local interest,
6 Celebration of local festivals and special days of the year dedicated to persons or ideas, and
7 Arrangement for dramatic performance[31]

71 INDIAN EXPERIENCE

Such activities which have been planned in the Delhi Public Library, under its Social Education activities progamme have proved a great success. According to the evaluation report on Delhi Public Library, "the overall figures of 16% (of the total attendance in such programmes) under 'Yes' (to the question:

Do you use the other services of the Library ?) is not high but it is still higher than one would expect to find in Western countries, where other claims on leisure is great ”[32]

8 Library Service

And these activities not only aim to introduce library's services to those who are ignorant of these but also create an active interest in the community itself The library then does not remain the problem of only one person—the librarian—but the community is there to support his cause And that is what we need and for which we are struggling for at the moment

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PART N

UNIVERSITY LIBRARIES

CHAPTER N1

Ideal of University Education

D SUBRAMANIAM

0 Introduction

LEAVING aside the integral self-realisation and self-expansion propounded by the enlightened sages of the Upanishadic times, in India, we shall endeavour to make a brief survey of the aims of education of the Western thinkers from the earliest historical times and find out how the ideals were fostered in the modern University education.

1 Western Education

11 GREEKS

In the early dawn of history, in the fourth and fifth centuries B C it was the Hebrews that shed the first ray of light to illuminate the Western world by imparting to the young ecclesiastical thought at the schools of their synagogues. In the Hellenistic world, the sophists wielded a healthy influence on the character of students by assisting the young Athenians in the achievement of individual political success and personal advancement. Discovery of truth, and rendering the individual a happy and a good citizen formed the key-note of the Socratic education. Plato affirmed that the purpose of education is to give to the body and to the soul all the beauty and all the perfection of which they are capable. Music for the mind and gymnastics for the body are according to him the two principal features of the method of education. In his *Republic* he emphasizes "Education is not a process of acquisition, but the use of powers already existing in us". Aristotle stressed that the individual is to be moulded to serve the ends of the state and thus grow in virtue under social control.

12 ROMANS AND ENGLISH

The Roman conception of education of the student was almost the same as that of Sophists in the creation of moral excellence, mental brilliance and eloquence. The monasteries and the Scholastics carried on the movement of education in the medieval times and many universities came into existence with a vowed purpose of imparting ecclesiastical instruction The *Seven liberal arts* Quadrivium and Trivium dominated the educational curriculum of medieval times. It was Bacon, the father of modern scientific thought, that initiated scientific trend of education and broke the ecclesiastical tradition, thus enabling the young student to think originally and formulate his own conclusions from the traditional knowledge The system of education according to Hobbes was the implicit obedience to the Sovereign power to serve the state. Commenius was the first to bring a religious motive in education He advocated individual investigation of facts and stimulation of interest in studies According to him, the educational discipline is to end in the harmonius blending with God

13 French and Germans

John Locke sums up his idea of a happy state in this world by propagation of the idea of a sound mind in a sound body Rousseau in his great classic *Emile* emphasized on the natural development and unfoldment of the instincts and capacities of individuals He thus influenced a number of later educational reformers to bring forth many important contributions on the theory and practice of education He stressed that every individual should learn a trade and that moral training is to be imparted by example and not through precept. The influence of Rousseau is clearly seen in Pestollozzi who stressed on the natural progressive and harmonious development of all powers and capacities of the human being Herbert emphasized that ethical character is the end of education. The unfoldment of the personality through the Kindergarten methods—employment suited to the nature of children—is the ideal embodied in the educational theory of Froebal Immanuel Kant echoing the ideals of Plato says, "Education should produce the perfect man, sound in character, active in mind and strong in body and prepare him for some possible ideal future"

14 America

The new method of modern education in America as advocated by Dewey lays stress on socio-economic goals "Education in order to accomplish its end both for the individual and society must be based on experience There is no discipline in the world to serve as the discipline of experience."

2 Education for All

Education thus is not mere learning; it is the bringing out of the full powers of every man and giving him the capacity and training to use them not only for his personal benefit but for the benefit of the general good of the community and to humanity A review of the aims of education as formulated in the West clearly indicates how from an extremely narrow interpretation and a restricted outlook to individuals, it developed into a broad one. All human progress and all human relations depend on education. The modern-day outlook of democracy is to develop and spread mass scale institutions. No national education should be a monopoly of a few, but should reach every member of the nation without the invidious distinction of caste, creed, colour, sex or age. It is incumbent on us to bring about the national advancement by various means of education which the modern world adopts

3 University and its Ideal

From the beginning, the ideal of a university has been preservation and advancement of knowledge As democracy advances in society it has a further responsibility for the illumination and instruction of public opinion The establishment of democracy guarantees to its citizens liberty and equality and the university fosters it, by a dispassionate and truly scholarly instruction and interpretation by means of lectures, addresses, symposiums open to students as well as to public and by the publication of the investigations carried out under its auspices The modern university, in a democracy, is a true light house which illuminates the path of those who may travel in any land The unhindered progress of nations is fostered and ensured by the true freedom of a university

31 RIGHT OF EDUCATION

It is the inalienable heritage of every citizen in a community to have the right of education in a university The heritage of civilization consists in the work of its artists, scientists and thinkers Every civilization creates a new vision of man which is the mark of its contribution to history It was Cardinal Newman who for the first time emphasized that universities should foster liberal education in order to engender catholicity of outlook which is so essential for the well-being of humanity "An assemblage of learned men, jealous for their own science and rivals of each other are brought by familiar intercourse and for the sake of intellectual peace to adjust together their claims and relations of their respective subjects of investigation They learn to respect, to consult and to aid each other. The students and teachers not only of the same but of differenct faculties should be brought together in living intercourse, in the daily work of the university

32 AIM OF EDUCATION

From the time the undergraduate enters the university, he should find himself a member of a community in which he has a part to play. There should be a close association of undergraduate and postgraduate work and any proposal tending to their separation in a university is injurious to both. The influence of the university as a whole upon teachers and students and upon all departments of work within it, is lost if the higher work is separated from the lower As affirmed by Ruskin, "We go to university not to learn a few bits of learning, but how to think highly of everything in the world" The aim of university education is not knowledge but liberal culture Mathew Arnold develops this idea in his inimitable way in his book *Culture and anarchy* The end of university education is knowledge which is capable of its own end or reward The search after truth is the urge of all mankind after the supply of our physical wants

4 Trend in University Education

41 THREE STAGES

The primary business of a university is the training of its undergraduates who are of an age when fresh intellectual impressions and habits of mind are easily formed and when the struggles and preoccupations of life in the world have not begun. In the modern universities three definite stages of progress of education are recognised The first stage culminates in the Bachelor of Arts, Science or Commerce or Technology degrees in which he acquires a mastery of the available knowledge and assimilates facts and principles through the help of books and teachers A Master of Arts degree is given at the end of the second stage when with an initiative and intelligence, the student masters the techniques by which knowledge is tested and additions are made to the sum total After this—the period of discovery or research—an investigation on a subject or problem not previously studied, commences and is awarded with a Doctorate

42 SCHOOL *vs* UNIVERSITY EDUCATION

The nature and aim of secondary education differs from the university work In the secondary school definite tasks are prescribed and knowledge is acquired when the mind is especially receptive and pupils are mentally and morally trained by the orderly exercise of all their activities In a school it is the teacher's mind that influences the thinking processes of the pupils In the technical and professional schools, theroetical teaching is limited and directed by the application of ascertained facts to practical purposes In the university, knowledge is pursued not only for the sake of information but always for the attainment of truth.

5 Importance of Research

Research is the well-spring from which the refreshing waters of life spring up. Bertrand Russell says, "Research and professional training are the two functions of a university. It is search for something with special care and diligence to arrive at facts which lead to principles. It is an attempt to investigate systematically phenomena with a view to arrive at certain general conclusions which may be applied in similar fields to anticipate or predict results or to apply the discoveries of basic sciences to develop a technique. It is not the quest of a simple fact; it is an attempted solution of a problem involving many facts" W Campbell in one of his inaugural addresses pertinently made an excellent statement concerning research "The problem of research is the problem of searching for the truth It is not a search for those fragments of truth which have already been found and are now described in books, more or less scarce or obscure but a search for existing truth which has not yet been found by anybody A professor engaged in research work is looking for something that already exists He does not invent truth Researches in any field of knowledge of various techniques are acquainted with the existing literature in their particular branches of study Love for truth, ruthless spirit of outspokenness, doggedness in the pursuit despite failures, dispassionate and impartial appreciation of others good points, proper capacity for assessment of one's own self and his limitations, are a few of the qualities developed in the pursuit of research " The Germans have realised that the qualities which research develops in a man cannot be evolved by any other means and hence they insist that for every university degree, a student should do some research work In the United States also persons with research experience are preferred in all industries for technical positions requiring enterprise, initiative and high ability to take decisions quickly in a correct manner

6 **Function of Library in a University**

Sir William Ramsay says, "A student who is ripe for research and who enters such a seminar is provided with a library, paper, pen, ink and a subject The method of using the library is pointed out to him and he is directed to read books which bear on the particular subject in question, he is made to collate the information which he gains by reading and to elaborate the subject which is given to him Naturally his first efforts may be crude "

61 Heart of University Work

The university library of today, is not an awe-inspiring place it was a few decades ago It is the hub of the wheel whose spokes reach into every department of the institution No university can develop or produce effective work without a strong library at its centre. Educational methods have changed and broadened so that both faculty and student are dependent on the library. A knowledge of the use of library is essential not only as a necessary tool for getting the most out of the university but also as a time-saver. "It is the heart of all university work, directly so as regards its research work and indirectly as regards its educational work which derives its life from research work. Scientific research needs a library as well as laboratories while for humanistic research the library is both library and laboratory in one Training in the higher branches of learning and research is mainly a question of learning how to use the tools and if the library tools are not there how can the student learn to use them?"

62 Main Library Work

The value of university library lies not so much in the number of books possessed by it but rather in the greatness of research and reference material available, that is in the terms of its contents, in the personality of the librarian and the efficiency of staff Emerson asserts, "The main work of the library is not the mere collecting and keeping the books but actively acquainting their constituents with and interesting them in their contents" Rabindranath Tagore also emphasises on this aspect "The bigness of a library is to be estimated and prided upon not by the number of books it accumulated but in the facilities it offers for the use of readers by bringing the largest number of books to the utmost use."

7 Value of Library Work in Research

Existing knowledge is the basis of discovery The thesis to be written has not only to display the scholarship of the student but of his research ability as well It is a combination of the original data gathered by the student and of the research work done by others In the beginning the research work done by others is reviewed to indicate the genesis of the topic of investigation A comprehensive list of all publications related to the subject, a bibliography, is given at the end of the thesis Thus a thesis cannot be completed without reference to library The originality of one's own work can be judged by reading what others have done and much of our fruitless labour will be saved by becoming acquainted with the work done by others The value of library work cannot be depreciated Any student who is interested in finding new facts about his particular line of investigation must at first familiarize himself with all that is already known about his subject and must have an easy access to the current literature not only of his common field, but the fields allied to his own In case of subjects like Relativity, Nuclear Physics, Space flights, Cosmic rays, an easy access to the current literature is of supreme importance because the subjects are developing very rapidly and any book summarizing must go out of date in a very short time The study of periodicals furnish the research worker with the results of work in research which have been completed and the investigator will be furnished with all the guidance required by the pioneers in the field. He follows in their wake for some distance and later on pushes on with his own original work. Hence books are the source of ideas and clues to discoveries The ideas embedded in books simmer in the brain and ripen in the mind of the worker and change into new outlandish ideas which contribute to further knowledge The life of Karl Marx, Faraday, Darwin and a host of others illustrate to us the value of library work A quarter of a century of regular, assiduous and extensive reading in the British Museum despite struggles of poverty and bereavements enabled Karl Marx to bring out the world-revolutionising book of *Das kapital*. Faraday's extensive reading and experimentation culminated in the publication of his famous, "History of the Progress of Electro-magnetism". Progressive ideas would never dawn mentor-like all of a sudden but they will ensue when the work of one investigator is combined with that of another The researcher should be able to state what has preceded his work, what additions he has made and how it is related to life and what it leads to "From the library, the student learns the degree of originality in his own research, the methods and achievments of investigators in the same fields, the relations of his work to what has been done before and gets glimpses of something of the road yet to be travelled to the ultimate solution of the whole problem "

8 **India and its Contribution to Librarianship**

Such is the predominant influence of the library in the modern university education and the votary of learning is not only made to realise the integral value of the fields of knowledge but to get an insight into the development and inter-relationship of the diverse fields of thought to understand the currents and cross-currents generated by progressive ideas India has an outstanding contribution to this field of knowledge as well The Indian tradition of pursuit of knowledge in any field has been on the basis of the fundamental principles dealing with the eternal and spiritual concepts of the four *Purusarthas* No study is limited to the intellectual level but it endeavours to release and reach the spirit in man The library science is no exception to it It should not only sharpen the intellect but should release the spirit in man

81 BEACON LIGHT

The credit of this new interpretation of library science on the basis of fundamental principles and reorientation of the same goes to Dr S R Ranganathan whose singular devotion and dedication to the subject of library science raised the status of India in the library world. The library technique developed by him in his dozens of books throws a new vista of light and makes the votary of this science look up to him for guidance and elucidation. The codification of library ideas in the Five Laws of Library Science, the Colon Classification, the Catalogue Code, the Chain Procedure, the Depth Classification with its potentiality for universal adoption in the documentation are a few of the outstanding achievements of the veteran scholar and abiding monuments of his extraordinary abilities and industry The younger generation of Indian librarians trained and imbued in the comparative methods of the Western and Eastern principles of librarianship, we hope, will be able to tackle the different simmering problems and bring out adequate solutions

CHAPTER N2

The Future of University Libraries

ROBERT B DOWNS

0 Role of Libraries

No well-informed person would question the often-repeated statement that the library should occupy a central place in an educational institution. This truism is accepted from the largest university to the smallest college. For scholars and students in the humanities and social sciences, libraries serve as basic laboratories. They are equally essential to the pure and applied sciences and technologies. The scientist, like the humanist and social scientist requires records of previous investigations and experiments to save him from duplication of effort and to provide a foundation for future progress.

01 CONTRIBUTION TO CIVILIZATION

In various forms, libraries have flourished since ancient times. They have risen to their most brilliant heights in advanced civilizations and sunk into neglect and weakness in periods of intellectual decadence. What we know of early cultures has come to us chiefly through the medium of the written word, as preserved in libraries, and their literature is the most accurate gauge we possess of the accomplishments of the great civilizations of China, India, Egypt, Greece, Persia, Babylonia, and Rome.

02 BEFORE RENAISSANCE

In the Western world, the medieval era is generally regarded as a period of eclipse of learning, unbroken until the Renaissance in the fifteenth century. That it was not entirely an age of darkness, however, is demonstrated by the wealth of illuminated and other manuscript books that have survived. Again, we are indebted to the written word for the conservation and transmission of most of what we know of the centuries sometimes referred to as the Dark Ages.

03 RENAISSANCE

The great revival of learning, called the Renaissance, in Europe five hundred years ago, had many characteristics including phenomenal progress in such arts as painting, sculpture, and architecture The event that stands out in our minds, nevertheless, giving the era unique distinction was the invention of printing and the proliferation of books From that time forward, the printing presses were busy spreading light and learning

04 EDUCATIONAL PURPOSE

In the succeeding five hundred years, our reliance on the printed word has continued to grow The treasures of literature, the records of past civilizations, and accounts of current research in all fields are communicated to us principally by way of the book and its related forms Indeed, education may be defined as a process of informing each generation of the accomplishments and thoughts of preceding generations, and then building upon these achievements Every step forward taken by mankind must start from the accumulated knowledge of arts and sciences as recorded in books and assembled in libraries

05 STORING KNOWLEDGE

A study of the evolution which has brought about this condition is revealing In the seventeenth century, in the days of Francis Bacon and John Milton, scholars took all knowledge to be their province It was generally taken for granted that a single human brain could comprehend and hold all existing knowledge Today that delusion has vanished, as the arts and sciences have been broken down into more and more minute compartments and specialities The burden of storing human knowledge has been shifted to books—millions of books in libraries Only in that way can any degree of control be maintained over the rapidly widening horizon of science and learning

06 DEPENDENCE UPON RECORDED KNOWLEDGE

Dependence upon the spoken and written word is a characteristic that distinguishes man from every other living creature Lacking this ability, he would be unable to create a broad common culture, and would reduce to the level of animals, learning only by observation, and imitation Because we have in written language a repository of the experience and learning of the past, each generation can begin where the prior one ended One could hardly conceive of modern science, modern government, present-day social organizations, and systems of education without the book. A cynic might remark that the atomic and hydrogen bombs would never have been developed, if we had not been able to accumulate such a vast store of scientific information, but we must assume that in the world of science and scholarship, all knowledge will ultimately benefit mankind Otherwise, we should close our schools, colleges, and universities—and of course libraries

1 Expansion of Universities

Today's university and its library are confronted by diverse demands and insistent pressures There is scarcely any fact of human knowledge not to be found in its research and teaching activities Throughout the world, an enormous expansion is taking place in the faculties, student enrolments, libraries, laboratories, physical plants, and all other conspicuous features of the principal universities

11 UNIVERSITY LIBRARY

These manifold demands and pressures are nowhere more evident than in the university library By nature, research is constantly changing, dividing, and extending The contemporary university is highly sensitive to these evolutionary processes As a corollary, the library must be highly adaptable, modifying its program to meet new requirements New departments are created and research interests in established departments undergo radical revisions—all causing an immediate impact on the library, its resources and its services It follows, therefore, that the university library must be a dynamic, living organism, fully responsive to change and always looking to the future.

If the preceding analysis of the role of books and of libraries during the past several thousand years and in the present age is reasonably accurate, what of the future ? Will books and libraries continue to be one of our basic educational resources ?

12 TECHNOLOGICAL PROGRESS

It is generally recognized that the rate of technological progress is constantly accelerating The chief effect of technology on the book world up to now, however, has been to speed production. Books, magazines, and other types of printed matter come from the presses at a rate that would have appeared miraculous a century ago.

On the other hand, it is amazing to realize that the product with which librarians are primarily concerned—the books—has remained substantially unmodified in form for the past two thousand years Certainly, since the invention of typography five centuries ago, variations in the book's format have been relatively minor

2 Book-World

Nevertheless, it may be a mistake to assume that the book-world will go on without more profound alterations than it has experienced up to the present. Occasional suggestions are made that books in their traditional form are obsolescent and will soon be replaced by newer media of communication, such as motion pictures, microfilm and microprint, sound recording, television, electronic devices, and radio facsimile transmission

21 Utility of Book-form

Looking at the matter as objectively as possible, none of the electronic wizards has suggested that we should or could dispense with language Accepting the fact that language is fundamental, what is the most satisfactory and effective method of storing language for future reference ? All the experimentation to date seems to demonstrate that at least in one important area —the handling of great masses of bibliograhical data—the book-form is more economical and efficient than any of the extremely expensive, high-speed electronic machines that have been developed to date

22 Development of Electronic Control

It is quite probable, of course, that the last word has not yet been said on the application of electronics to libraries As a matter of fact, it is almost essential that mechanical or electronic means be developed for bringing under bibliographical control the mountains of print that threaten to bury scientists, scholars, research workers, and librarians

3 **Future of Books and Libraries**

It is my carefully considered prediction that the following developments will affect books and libraries during the remainder of the twentieth century

1 The book as we have known it since 1450 will remain the staple offering of libraries and will not be superseded by any invention now in sight, simply because it is the most satisfactory, attractive, efficient and economical device ever discovered for its purpose

2 Further research and experimentation will result in the successful adaptation of electronic methods for international bibliographic control, greatly expediting scholars' access to their materials Along with this advance, there will be further perfection of translation machines, to save a vast amount of drudgery and expense and to effect an important saving of time These changes, rather than making librarians obsolete, will require more and more highly trained catalogers, classifiers, and subject experts in the profession

3 Radio facsimile transmission methods will be perfected, largely eliminating present-day forms of inter-library loans, making the resources of great library centers readily available even to remote areas, and immensely facilitating study and research everywhere

4 While the printed book will continue to be the primary stock in trade of librarians, they will add to their resources a wide range of auxiliary devices:

documentary films, filmstrips, sound recordings, micro-reproductions, radio and television installations, and any future inventions that may have utility for the dissemination of information and ideas.

5 The revolution in library architecture will continue Such concepts as modular construction to provide for greater flexibility, scientific lighting, air-conditioning, and extensive use of color, which have come into vogue for recent library buildings will create more inviting conditions than even before for work, study, and recreation in libraries

6 The long strides during the past generation toward making librarianship a true profession will gain impetus In school, college, and university libraries there is a great ferment prevailing on the question of status. As professional standards for librarians are raised, bringing their academic and other qualifications on a par with those of teaching faculties, they will be granted full academic recognition in rank, salary, and similar perquisites.

7 A major factor in establishing librarianship as a profession is strong library schools The general level of library education is rising steadily, with a trend away from the teaching of technical details and routines The present emphasis is on giving students an understanding of the library's place in the community and the social significance of libraries—in short, on developing the professional character of librarianship I anticipate that this trend will grow in strength, that more schools will offer advanced training, and through teaching, research, and publication they will make a convincing contribution to the claim that librarians are members of a genuine profession

8 Great advances will be made in co-operative cataloging, nationally and internationally, with general acceptance of standardized codes, agreements among national libraries of the world to share the burden of cataloging and publications of their own countries, and coordination with publishers to expedite the preparation of cataloging data

9 Perhaps on a pattern similar to the Farmington Plan in the United States, there will be an increasing interchange of books, periodicals, and government publications among nations, helping to disseminate the result of scientific and scholarly research and increasing international understanding

In making the preceding predictions, I have simply attempted to project into next forty years trends that seem distinctly observable today. Many things could happen to upset such forecasts of the future—wars, changes in governmental and social structures, revolutionary new inventions, and the like As viewed from present perspectives, however, they appear to be reasonable guesses.

4 Library Service

If future developments are in accord with my prophecies, libraries will not only continue to rank among our major social institutions, but they will have opportunities for service far surpassing anything in the past. Scientific and technological progress in all fields will depend in even greater measure than at present on the expert organization of knowledge in libraries

5 Unique Position of Libraries

As important as that is another and broader function Libraries are in a unique position to advance the cause of public enlightenment and understanding concerning the great issues of our time They can only make such a contribution, however, if they remain free and unfettered Unfortunately, the voices calling for conformity, for unanimity of opinion, for eliminating all ideas with which they happen to disagree have grown more strident, more intolerant, and more uncompromising in this generation Thus, librarians are frequently confronted with demands for the removal of books dealing with alien political philosophies, or that may offend certain racial or religious groups, or that may be considered unsuitable reading for children The censors will never learn, apparently, that ideas cannot be killed by suppression No doubt our difficulties in this field will continue until the end of the cold war and international turmoil—that is to say indefinitely—for it is in such an atmosphere that fear and hysteria flourish

51 BACKWARD AND FORWARD MARCH

In his story, *The Time Machine*, H G Wells imagines a device whose owner can travel at will backward and forward through the centuries The nearest equivalent we have for this marvellous invention in our own time is a good library When one enters such a library, he remains in the present By proper manipulation of the library, however, he may put himself swiftly in touch with another age, familiarizing himself with the stored-up knowledge and wisdom of that age, some of which may have application to the current era Or, like Wells' time traveller, he may look ahead into the future—tomorrow's society, tomorrow's scientific advance, tomorrow's problems

6 Future Libraries

There is an overwhelming support for the belief that libraries not only have a future, but that their most brilliant period of growth, development, and service is ahead of them. They will not remain unchanged just as the library of a medieval monastery was vastly different from a great research library of the twentieth century They will grow and evolve with the demands and needs of the time Their form may be altered and modified, but their essential functions of providing culture, information, and recreation are unlikely to change in the foreseeble future.

CHAPTER N3

An Ancient Indian University Library

BIMAL KUMAR DUTTA

1 Education in Pre-Buddhistic India

IN the Pre-Buddhistic India education was mainly individualistic. Education was imparted by *gurus* or teachers to the students according to their respective trends of mind, aptitude and calibre. The students used to live with the preceptor as an intimate member of the family which helped them to form their both external and internal ways of life. The abodes of the preceptors or the Ashramas were generally situated within and around the natural surrounding where the students had ample opportunities to grow in close relationship with nature in an atmosphere of calmness and solitude.

2 Education in Buddhistic India

From the time of Buddha's preaching of the new faith the ways of imparting education changed. After the death of the Lord, innumerable monasteries grew up all over India which were the centres of teaching. These monasteries in course of time turned into store houses of knowledge each monastery furnished with a library of its own. From the accounts left by Hiuen-Tsang, Fa-hsien and I-tsing it is evidently clear that they stayed in many of the monasteries for considerable periods of time to study the Buddhist literature as well as to get them copied. I-tsing stayed ten years out of his thirteen year's stay in India at Pataliputra for studying and copying Buddhist text.

In course of time some of these centres of learning became important for higher education and students from different parts of India as well as from abroad used to come there for study. Among them special mention should be made of Nalanda University and its library.

3 Nalanda University

Among the reputed centres of Buddhist learning and teaching Nalanda University occupied a unique place and played a dynamic part in the field of ancient Indian education from 5th to 13th century AD.

According to Dr R K Mukherjee the place did not become educationally important before the rise of Mahayana Buddhism at the beginning of the Christian Era. The growth and development of this centre was slow and gradual and upto 5th century it was a seat of Bramh nical learning The truth of the above statement is further corroborated by the fact that Fa-hsien visited the place known as Nala as it was here Sanptra was born and died He furnished us with no further information regarding the academic importance of this place.

31 Growth of Nalanda

The factors which contributed to the growth and development of a Buddhist University at Nalanda are as follows

1 Long before the Christian Era the place was noted as a religious centre Lord Buddha visited the place often and held many discussions here Besides the Jaina Tnthankar Mahavir met Gosala here, and Ashoka built here a temple and a Vihara
2 Continuous royal patronage by Kumar Gupta (415 A D-455 A D), Skanda Gupta (455 A D), Purugupta (467 A D) Baladitya, Narasimhagupta (470 A D) Kumar Gupta II (473 A D) by Harshavardhan, the king of Central India and then by the Pala and Sen rulers of Eastern India
3 Suitability of the location which was nearer to the busy and important city Rajagnha but yet enjoyed a comfortable distance ideal for study and worship

During the time when Hiuen-Tsang visited the place there were about 5000 monks studying at Nalanda I-tsing stayed there for a period of ten years during which he collected 400 Sanskrit texts amounting to 500,000 slokas The following account of Hiuen-Tsang (Walters II p 165) will speak by itself the reputations and nature of the University — "In the establishment were some thousand brethren all men of great learning and ability, several hundreds being highly esteemed and famous, the brethren were very strict in observing the precepts and regulations of their order, learning and discussing they found the day too short, day and night they administered each other, juniors and seniors mutually helping to perfection. Foreign students come to the establishment to put an end to their doubts and then become celebrated, and those, who stole the name (of Nalanda) were all treated with respect wherever they went."

Students from all parts of India as well as from foreign countries as China, Korea, Tibet, Tokhara, etc used to get admitted and the standard of admission test was very high

4 Nalanda Library

According to the Tibetan accounts Nalanda was equipped with a well-maintained and huge library called Dharmaganja or Piety Mart It consisted of three huge buildings called

1 Ratnasagara;
2 Ratnadadhi, and
3 Ratnaranjaka

Ratanadadhi was a nine-storied building which housed the sacred Mss Prajnaparamita sutra and Tantric works such as Samajguhya etc

5 Donations for Nalanda

The university was at its brightest reputation and international glory in the 9th century A D From the Nalanda copper plate grant of Devapala Deva we come to know that Devapala Deva in compliance with the request of the ruler of Suvarnadipa (Java) Balaputradev which was made through an ambassador, granted five villages, four of which lay in the Rajagriha (Rajgir) and one in the Gaya district of Sri Nagar Bhukti (Patna division) for the increase of merit and fame of his parents and himself and for the sake of income toward the blessed Lord Buddha, for various comforts of the revered Bhiksus of the four quarters and for writing the Dharma ratnas a Buddhist texts, for the three jewels and for the upkeep of the monastery built at Nalanda at the instance of the said king of Suvarnadipa

From the above evidences it is clear that the king of Java and Sumatra being attracted by the magnificence of the University erected a monastery there and induced the king of Bengal—Devapala to grant five villages towards its maintenance It is interesting to note that there was the regular practice of copying manuscripts as a portion of the said gift was reserved for copying manuscripts of the University Library

6 Conflagration at Nalanda

The University had faculties in all the branches of the then available knowledge—sacred and secular, science and arts as well as philosophical and practical and the magnificent library which stored manuscripts in all these varied fields was destroyed by the Muslim invaders According to the Tibetan source the establishment was repaired and other new temple was erected but finally they were destroyed by fire. Dr S C Vidyabhusan's Mediaeval school of Indian Logic (p 146) describes the whole picture as follows.

> "After the Turaskha raiders had made incursion in Nalanda, the temples and Chaityas there were repaired by a sage named Mudita Bhadra. Soon after this, Kukutasiddha, minister of the king of Magadha, erected a temple at Nalanda and while a religious sermon was being delivered there, two very indignant Tirthaka mendicants appeared Some naughty

young novice monks in disdain threw washing water on them This made them very angry After propitiating the sun for twelve years, they performed a yagna, fire sacrifice and threw living embers and ashes from the sacrificial pit into the Buddhist temples This produced a great conflagration which consumed Ratnadadhi ”

CHAPTER N4

University Library Building Planning

JACKSON E TOWNE

0 Giant of Library Profession

MY acquaintance with the learned gentleman whose seventy-first birthday is now the occasion for a commemoration volume has been quite limited but sufficient to stir my admiration, for I had the good fortune to hear Dr Ranganathan read a paper of some length elucidating the Colon Classification some years ago at an Institute held at the Graduate Library School of the University of Chicago. "Listen carefully," I told myself, "for here is another *Giant* in our field, such as was Melvil Dewey".

1 Michigan State University Library Building

The Michigan State University Library was dedicated in May 1956. A discussion of the planning may be found in *ACRL monographs* No 4; Fall, 1952. A number of good pictures of the structure (both exterior and interior) are available in *The Pioneer* of the Library Bureau Division of Remington Rand, V 19, No 5; Sept-Oct, 1956. The building is an important one. It has a gross floor area of 216,000 square feet. The total cost was four million dollars. More than 23,000 full-time students are now served by the building. The volume holdings now exceed 800,000; and the library is a member of the Association of Research Libraries.

11 LETTER TO MR METCALF

Having been librarian at Michigan State University between April 1932 and July 1959, my role in planning the 1956 building was paramount. When Keyes Metcalf, former Director of Libraries at Harvard University requested some university library building information from the readers of *College and research libraries* for July 1960 (on page 315) I wrote to Mr Metcalf the ten-page letter on 4 August 1960, which follows. This is really more of an article than a letter and I could have recast it as an article but I have retained the letter form to preserve the occasional sharpness of tone in the intended personal appeal, as I first dictated my remarks, in the summer of 1960 Mr Metcalf's important role in the field of university library building planning is, of course, well known He has been an expert consultant for some years I am hoping that my comments may be of interest to anyone concerned with the satisfactions as well as the possible pitfalls involved in planning any large university library building, anywhere in the world

2 Introduction

In answering your request for building information on page 315 of *College and research libraries* for July, 1960, I find that I have written to you a veritable monograph I am prefacing it with a rough table of contents

I enclose a copy of a paper which I read on the occasion of the dedication of our new library building, May 19, 1956, before the First Midwest Academic Library Conference In this paper I confessed some errors in accordance with the traditional *post mortem* new building comment, and these errors I omit from the material I now send you in letter form

I agree that librarians who have shared in responsibility for planning a building may naturally be reluctant to call attention to its faults, but you must also bear in mind that members of the staff who were not involved in planning will not only be more outspoken critics of architectural mistakes but will almost certainly exaggerate these, partly from ignorance of the extenuating circumstances involving the errors and partly because of the contempt of youth for age

I have heard many criticisms of new library buildings that were quite capricious

In my case you are hearing from a librarian who belongs, in a sense, to a special category I planned a building, retired from service in it, and am now back on the campus for a two-year stretch (as Professor of Bibliography) with certain definite changes having been made in the building since my departure I shall answer your questions but with the most recent changes primarily in mind These changes were tentatively blocked out on floor plans by my successor both before and after his appointment and before my departure and involved nothing basic to which I was opposed I was mistaken in assuming that I could absent myself from library staff conferences on these changes in the interest of more free discussion from subordinates, without being misunderstood It seemed to me that a more rigid attitude on this matter on my part would be stiff necked and picayunish But a retiring official's hospitality to his successor, I find, will be misunderstood by some.

I authorize you to quote anything or everything in this communication If possible, I should like to be warned of the general context in which any quotation will appear. I realize that you will receive so much material that any data or comment from Michigan State University may be passed over entirely when you narrow down to final publication. You may or may not hear from my successor I should be surprised if you did not At the moment, "Dick" Chapin is on vacation at Fort Lauderdale, Florida.

3 Planning

31 ARCHITECT

Did special problems arise in dealing with the architects?

Our architect was Ralph Calder of Detroit He had built no college libraries except Hillsdale, Michigan, when selected by our President. He has since built the library at Western Michigan State University at Kalamazoo and has planned the library for "Michigan Tech" at Houghton He has built the majority of the new buildings on our campus. He is a good modern designer, and uses much glass The engineering side of his staff needs strengthening Some minor matters reported when we accepted the building, such as the lack of double locks on double doors, have never been corrected See comments in my paper of May 19, 1956, regarding Mr Calder

32 TROUBLE FEATURES

What features have caused trouble?

(*a*) The building leaked after we moved in and the librarian's office, which is located in an extension of the building with a concrete-paved porch over it, always leaked at one window after a bad rain Many conferences with the contractor and the university building staff were held over this matter One explanation that I have heard is that the tar which was used to seal the edges of the concrete roof over the windows was improperly boiled before it was applied Also that a cheap putty was applied to the window glass, the proper, water-proof, putty being a quite new material and most expensive

(*b*) The auditorium, on our fourth floor, is walled in on all four sides. It ventilates very badly, the fans making so much noise that a speaker cannot be heard even before a small group The air is stifling

(*c*) The fourth floor, which contains the auditorium, staff room, graduate cubicles, and some offices, does not have a sufficiently strong floor to carry loaded book stacks I learned this to my surprise only a month ago

(*d*) Space assigned to the mechanics of the building has been wasted A standard percentage for this space in relation to all other kinds in a library building should be established Our President asked that two large penthouses be designed on the roof to break up the shoe-box effect of a big bare rectangle, and Mr Calder did a fine job in following this wise request. Some of the building mechanisms are located in the penthouses. Aesthetically the penthouses are a notable success, from the exterior but actually considerable space is wasted within.

33 Faulty Space

Are there faulty spatial relationships ?

(*a*) If the present divisional groupings are wise, then perhaps there should be only one room, rather than two on two different floors, for the Humanities, and this one great room should seat over 500 students

(*b*) The location of Technical Services on the first floor adjoining the public catalog is an arrangement which Mr Calder, and I, took from the Princeton plan If it is necessary to serve a high number of the enrolment below the second floor, then Technical Services should have been placed on the second floor This arrangement, which can be seen on a large scale at Wisconsin, where the staff has a special elevator down to the public catalog, is, I believe, not a popular one I recall Dr Kaplan being questioned sharply about it at the Ann Arbor building conference

(*c*) My successor at Michigan State University was appointed shortly before the beginning of the calendar year of 1959 and took office on July 1st, at which time I went on terminal leave until July 1st, 1960 The collections have been re-arranged, in that the divisional reading rooms of Social Science and Literature, College of Education, College of Engineering and Science, have been dissolved and the collections telescoped to three major divisions, humanities on the ground and first floors, social science (including business and education on the second, and science (including agriculture and engineering) on the third. The Engineering Room has been stripped of shelves and is an open reading room, now converted into a newspaper and map room The block classification has been discontinued and the books are in more continuous flow from the reading rooms to the now open stacks Documents have been moved to the former Fine Arts area; and reserved books moved from a consolidated open-shelf collection on the ground floor to separate collections on each floor at the check-out points for the divisional areas The collection is being rapidly changed over to the Library of Congress classification and books are shelved in each area in two separate groupings, the L C and the D C This seems to make for a great deal less confusion than might be expected

(*d*) It is impossible to discuss building planning without discussing policy as well For 27 years, during my administration, the library at M S U was so conducted that department heads of instruction might have an unquestioned say over portions of the book fund, and the divisional areas were planned in the new building to correspond, roughly, at least, with the administrative limit of the respective deans of instruction, so that these officials could feel that they had some say, and responsibility for observation of the conduct, of, at least portions of the library.

An argument against this arrangement is the fact that new colleges keep springing up over night at M S U, and one would end with too many rooms Even so, I felt that we could accommodate one more, for the latest College "baby", Communication Arts, by combining journalism and speech books, in a room adjoining Fine Arts New colleges may spring up overnight at M S U, but academically this is not a good thing, a university of quality does not develop in this way, and the tendency at M S U cannot continue to enjoy general approval Today the departments through the library committee have renounced a detailed responsibility for the expenditure of book funds; and the divisional areas have no longer any correspondence with curriculum layouts Divisional librarians are better book selectors than faculty members, and a simplified general arrangement of collections is easier to administrative, but the arrangement is less democratic than mine and the faculty has lost a control which I kept open on paper to the end, and which was little appreciated at the end because the original planning of the building was given less of a "play" than at Iowa City, for instance.

Flexibility in a building is not really there just because interior walls support nothing and can readily be removed if they happen to be built of mere gypsum blocks, as is true of our interior walls. The only really removable wall is a mere screen, on well-oiled rollers ! It is often more difficult to secure authority to remove a single interior wall than it is to get an appropriation for an entire new building ! It was not sufficiently aware of this when Architect Calder defended the walling in of the four rooms on the North side of our building He argued that any room could be used also as stacks, or vice versa, that the walls were removable, that a single check out point on the first floor, or one on each floor, or one for each room, could be used But the fire laws required *each* floor of the building to be open at *each* end

I was inclined to favor some walled-in areas, so that the collections might in part, at least, reflect something of the divisions of the university curricula I regarded the empty street-car barn effect which the University of Iowa present as unaesthetic, sprawling, diffuse, leaving the reader, or the researcher, to hop about from island to island in the various fields of knowledge instead of providing an entire continent in which to settle, for either casual reading or intensive research

When the earliest open-shelf, divisional libraries were planned, beginning at Colorado and continuing at Nebraska, for instance, selected collections were given separate catalog treatment and about $30,000 was spent at Boulder and at Lincoln in preparation for the new arrangements Not one penny could be spent here

That collections would quickly over-flow closed rooms, assumed of course, and the block classification was adopted as the first solution, with the second possibility the charging out of runs of materials, as at Oklahoma A and M It seemed less likely that the institution might later wish to prepare especially selected collections for any of the rooms, as had originally been done at Boulder. The fourth possibility, a continuous flow of classified material within an entire floor would involve a break at entrances and exits to walled-in rooms, but breaks of some sort are necessary in even the most continuously flowing collection of classified materials. This is well illustrated in the Wayne University Library, for instance

Just before firming up the original assignment of reading rooms, I suggested to the Dean of University Services that we exchange the College of Education with the College of Business on the second floor, giving the latter the larger of the two rooms That afternoon the Consultant to the President, who held a Professorship in Education, sent for me and said "I hope you are giving the College of Education as large a room as there is in the new library because, that College will have the largest enrolment" How does he like it now, that the readers services for Education are centered in the *smaller* of the two rooms on the second floor ?

34 ACCOMMODATION

Has the building proved to be too large or too small ?

(*a*) The building has proved to be too small, of course No university library building has even proved to be too large

(*b*) We were told when we began that we could not plan for more than 15,000 students There are now over 20,000 In the back of the President's mind lay the intention to take over the space at the end of a future quadrangle of buildings across the Red Cedar River where the new College of Engineering is being projected Thus there could, and perhaps may still be, a large science library, leaving the present library to house only social science and the humanities

(*c*) The present building can house a million volumes with only a small portion of these in compact shelving, for the large collection of federal documents counted as volumes telescopes in space-consumption Seating capacity can be increased to 2,500, but there are not those many chairs as yet

35 SITE

Is the site selected unsatisfactory ?

No It is central in relation to dormitories and the student union, which is more essential than in relation to classrooms The academic center of the campus is shifting gradually to the south east

4 Internal Planning

41 FURNITURE, AIR CONDITIONING, LIGHTING

Have difficulties arisen with furniture and equipment, air conditioning systems or lighting?

(*a*) When we moved into our new building it was necessary to take on 1,100 old chairs and a accompanying old tables from the old library. Some of the chairs had been recently purchased and were the proper color to match the new furniture but by no means all. When we first moved in, a good job was done of dispersing the old furniture so that one was aware of it to a minimum degree. The ground floor, the first floor and half of the second had all new But with the re-arrangement of the collections, and the use of old steel cases to partition of various services in the reading rooms, a far less satisfactory arrangement of the old furniture, emphasizing the mis-matching of some of it, has developed Those members of our staff who have no special aesthetic sensibility on this point seem indifferent to the problem and disinterested in attempting any solution, which at best can only be partial

The university should replace the old chairs at the earliest opportunity In general the old furniture places the new arrangements at an aesthetic disadvantage

(*b*) The university power plant is not budgeted for refrigerated air

(*c*) The rare book vault needs to be equipped for temperature control.

(*d*) I have heard no major complaint of the lighting.

42 Service Facilities

Are service facilities inadequate ?

The elevators operate too slowly (And they are poorly ventilated)

43 Prevention of Noise

Has the building been too noisy ?

The students sometimes complain that the staff in the divisional reading rooms talk too loudly; but the building has been adequately acousticized

44 Vertical and Horizontal Circulation

Are the arrangements for vertical and horizontal circulation as they should be ?

(*a*) A large main circulation desk on the first floor stands idle, as at Washington State, at Pullman The desk could be used for the issuance of closed shelf reserves in the Humanities fields This was thought of when the possibility of the desk standing idle was considered (The desk has been placed in full operation since September 1961)

(*b*) There is a book lift centrally located in the building but the outlets on the second and third floors which were originally planned to be near closed reserve collections (to be approached by students from counters in the corridors) are now mislocated.

5 Style of Architecture

Has the style of architecture caused trouble ?

A modern building certainly causes less trouble than a Gothic or a Renaissance one Buildings with lots of glass tend to leak, at least at first, until properly diagnosed

6 Cost of Construction

Was the cost of construction higher than anticipated ?

Yes In three years the cost rose from the original $4,000,000 to $5,200,000 and the excess million had to be saved through lopping off modules, vertically, at the south west corner This reduced the number of projected faculty cubicles on the top floor from 100 to 50 To compensate for this loss, inside as well as outside cubicles have been installed this summer in the corridors originally planned for the cubicles, providing a total of 115 cubicles, 62 of which are without windows There is a general feeling that when the cubicles are made available (in September, 1960) those without windows will prove very unpopular

7 Changes in Planning

If you were to begin again, what changes in your own dealing with the problems would you make ?

(*a*) I would begin by suggesting an undergraduate library like Harvard's Lamont and those at the University of Michigan and Cornell (and the one contemplated at Colorado) this library to be combined in one building with a research collection for the social sciences and the humanities, with the idea that science collections would ultimately be housed in the quadrangle across the river adjoining Agricultural Engineering, Animal Industries and the new College of Engineering plant, but science to be housed in the meantime with the social sciences and the humanities An undergraduate library building larger than the one at Ann Arbor is under construction at the University of Texas in the winter of 1962

It should be noted that at one time a separate library building was contemplated for the Basic College, now called the University College A committee under the chairmanship of the head of a department later eliminated from the Basic College curriculum met with the university librarian and drew up a plan which was filed with the building committee of the American Library Association This plan would have taken care of only those students enrolled in their first *two* years at Michigan State

(*b*) If the undergraduate library was out of the question I would draw up two somewhat opposing plans, the empty street-car barn type, as at Iowa, and the clearly defined reading room type, as at Colorado, and offer these in mail ballot for an expression of preference from the voting faculty.

(*c*) I would make sure that the Administration would support any contemplated plan for close checking from the first day of operation

(*d*) I would make sure that the official publicity of the institution regarding the new library would echo an enthusiastic support of the library from the Administration from the moment of dedication. There was an hiatus on this point at MSU because no failure was anticipated by the Librarian or by the Dean of University Services or by the Dean of the College of Business, who was the current President of the Friends of the Library when the building was up for dedication A mismanaged ceremony at the dedication of a different type of university building several months before had resulted in a paring down of participation of the highest administrative officials at all future new building dedications. This was certainly not fully understood by some It was the obligation of the university's Information Services to make this difficult matter clear

(*e*) In beginning again, I would insist upon fuller discussion of building plans with the library staff, and would rule out more arbitrarily the intrusion upon such discussion of problems of faculty status, and salaries

(*f*) I would have an understanding with the university's Information Services regarding projected changes following the retirement of the librarian responsible for the original planning (This would hardly be necessary in the case of an Information Services agency operating with discernment)

(*g*) If I were starting again in the same faculty atmosphere which preceded the firming up of our original blue prints I might still feel that there would be an *initial* prejudice against open stacks, and I might still be inclined to a *beginning* plan which would involve open-shelf reading rooms *but closed stacks*

81 HELP IN PLANNING

Did you receive too much or too little help in planning from the administrative officers of your institution, your academic staff and your students?

(*a*) In the beginning we were fearful lest our plans be over-discussed in faculty meetings and talked to death We were assured that there was a vast mimeographed volume of faculty discussion on file at Iowa City, with 90 percent of it obsolete by the time the building actually got under construction

When the blue prints were firmed up, the Dean of University Services and I made appearances before the Deans of the various colleges and their department heads and we made a second appearance before selected faculty groups of non-department heads, to explain arrangements

The plans were inevitably complex and were not always understood. Irrelevant issues, such as a professor's impassioned plea for the location of a cafeteria in the library basement, often occupied much of the allotted time.

The science departments resented the somewhat sharply imposed policy of centralization of all books Existing departmental libraries were threatened with absorption This policy was urged upon the President by the State Architect ("from down town") as an essential one to secure a favourable appropriation from the legislature The impetus behind the policy was difficult to explain to faculty members, particularly those not appreciative of the continuous necessity for good public relations facing the President

(*b*) We had not had very satisfactory results with student members of a committee to consider the loss of books from the old library The student members seemed twice as heavily scheduled as the faculty members and almost never with a free hour when they could attend our meetings This discouraged later consultation of students in connection with building plans There was no obvious student interest in them

After the building was in operation and close checking at the doors had not been instituted, on the grounds that this would preoccupy the divisional libraries, and that student help was insufficient (two arguments pressed by the Associate Librarian) an important student (representing the fraternity group) was positive that the introduction of turn stiles would be unpopular and that the students might stage a riot The question of the discontinuance of the ROTC was violently agitating the students at this time and the university administrative officers took the warning of the possibility of a riot seriously It was argued that to search a student reader for a suspected theft of a book at a library exit was unconstitutional. This issue was first brought up by registrants in police administration, who argued for an open door policy.

Had these difficulties with the students been foreseen, their leaders would have been approached to sign some sort of statement recognizing the necessity for close checking in the library. *At the time that the library was first opened for operation there had been no questioning of close checking methods by any large student group at any other university maintaining an open-shelf system*

The Associate Librarian worked at the issue of securing the assent of student leaders to close checking and in the end, following my retirement, close checking was installed at the points of exit from the divisional rooms exactly as I had originally planned it and the issue subsided The checking seems to me to be insufficiently close and sharp at the present time (Turn-stiles at the main entrance were installed in September 1961)

(*c*) During my last year I secured a unanimous request for close checking from the library committee and made sure through special communications that all department heads of instruction were well aware of my personal concept of what the policy should be In this I was supported by our Dean of University Services, taking leave of my library committee I made the comment that in 40 years of university library service it had been my experience that a librarian is never blamed for book losses, even if these be astronomical, but is always blamed for any restrictive action or rule which tends to keep books on the shelves for an ultimate greater number of readers

82 OUTSIDE HELP

Were there other problems than those listed above on which you would have found outside help in print or in other forms useful?

(*a*) In the course of planning our library, I visited, briefly, new library buildings at City College, Colorado, Georgia Tech, Iowa, Lamont, Marquette, MIT, Nebraska, New York State TC (Buffalo), Oklahoma A & M, Queens, Trinity, Washington State, Wayne, Western Reserve and Wisconsin While the librarians at all of these institutions were invariably hospitable, some were less than frank, in comments upon our plans, or possible pitfalls

(*b*) This is a minor point, but I would advise any university librarian who builds to be sure to stock at least 300 copies of photographs of his building, floor plans and descriptive write-ups As soon as his dedication is over he will be bled white for this data by correspondents from Alaska to Zanzibar

In conclusion it might be mentioned that the publicity regarding new university library buildings in library periodicals has sometimes been out of balance The largest institutions would seem to me entitled to the best and the most publicity But sometimes a mere college has enjoyed fuller coverage, more definite featuring of cuts, particularly of the front elevation, and so on

PART P

LIBRARY ADMINISTRATION

CHAPTER PI

Team Work, Staff Council and Renaissance in Library Science

K M SIVARAMAN

0 Genesis of Library Science

IT was in the latter half of the nineteenth century that the library techniques were systematized by Melvil Dewey and his associates. Under the drive of his creative genius, they made distinctive contributions to the field of Library Science. Thus the American nation itself has been considered as having rendered a great service to other nations in this respect.

1 A Renaissance

Nearly half a century later, it is another nation that has been destined to sharpen the techniques designed by the Americans and redesign some of them to suit the modern condition and to carry forward the torch lighted by Dewey. The event that made this possible was the appointment of the first Librarian of the Madras University Library.

11 RANGANATHAN

It was one of the Assistant Professors of Mathematics in the Presidency College, that was offered the then newly created post of the University Librarian in Madras. He accepted it in 1924. Eight months after his appointment, Ranganathan was deputed to Great Britain to acquaint himself with modern library methods. There he made an intensive study of the organisation and administration of all types of libraries in various parts of the country. He examined the process in every department in each library and spent much time in evaluating these processes and tracing them to the reasons that lay at the back of each of the processes. This was of considerable educative value and at a later date helped him to lay the foundation for an eclectic system of library economy.

111 EMERGENCE OF FIVE LAWS

His powerful probe into the practices of the libraries of Great Britain yielded five fundamental normative principles as the foundation for the efficient organization of a library system and the administration of an individual library. He applied them in his own library when he returned to Madras in July 1925. The work connected with the reorganization of the Madras University Library (consisting about 32,000 volumes and adding about 6,000 volumes each year) virtually from scratch led to a full utilisation and a confirmation of the versatility of these principles

Every step in the design of the then new Colon Classification, the formulation of every rule of the then new Classified Catalogue Code and the evolution of every detail in the administration of the Madras University Library and the humanisation of its service radiated from and got irradiated by those normative principles They were also expounded by the author on several occasions from every available public platform All these exercises gradually disclosed the rich potentiality and implications of these normative principles

112 PUBLICATION OF THE FIVE LAWS

When Ranganathan found that the principles he had evolved were quite helpful, he wrote a book on them and offered it to the Madras Library Association for publication This Association was founded in 1928 and it had as one of its objects, "to conduct a periodical and publish books, pamphlets, etc, on subjects relating to Public Library Movement" Hence the offer was accepted The book was published in 1931 under the title *Five laws of library science*[1] This book had proved to be the progenitor of all the other books on library science published by the Association and of all the papers and all the other books on Library Science written by Ranganathan and his school of workers The publication of this book may be taken to mark a Renaissance in Library Science

The Five Laws are now acting as leaven for all those connected with libraries and library work both in India and elsewhere They have brought about a new productive outlook in the development of library science and in the rendering of library service

2 The Staff of the Madras University Library

Till 1924, the entire staff of the Madras University Library consisted of just five clerks Only two of these had completed at least the high school course Service was naturally at a low level—hardly a dozen visitors in a day, no classification, no reference service, no open access, no admission to students The library had to be re-organized in a revolutionary way. Such a re-organization necessitated the recruitment of additional staff By 1927, fifteen new places were created in the cadre of the superior staff The senior members were all graduates fresh from the university, devoid of any experience in any office, and free from any pre-conditioning by any library tradition

One fortunate feature was that they were all devoted to their work The young entrants to the profession thought out for themselves and discussed with each other the problems arising in their day-to-day work and adopted suitable methods for getting over their difficulties The methods thus evolved were tested again under different situations and each one of the results was recorded when it was found quite sound Ranganathan was all help to the staff in this pioneering work

21 SECTIONS OF THE STAFF

The rapid increase in the work of the library and in the staff made it necessary to form appropriate sections and entrust each section with its distinctive functions At first, that is, in 1927—there were five sections—the Administrative, Periodicals, Technical, Reference and Circulation Sections The Administrative Section was concerned with the ordering and accessioning of books also in addition to the usual duties concerned with the general administration of the library The rest of the sections performed the distinctive functions suggested by their names

3 Staff Council

The division of the staff into sections had immense benefits But it had its defects too There was an overlapping of functions in a few cases and hence there was a wastage in the time of the staff There was also a tendency among some members of the senior staff to look with an air of superiority on their colleagues basing their attitude on the false assumption that the work allotted to their own sections was the most vital Ranganathan felt that these defects could be rectified if the members of the staff could be brought together by some method and could be made to cultivate *esprit-de corps* He hit at the idea of the Staff Council in 1932[2] By the creation of the Staff Council, it was also felt possible to eliminate the un-intended overlapping of functions and the consequent wastage in the time of the staff by effectively correlating the functions of the different sections and also correlating the work of the different members in the same section The Librarian was the Chairman of the Council and the Heads of Sections were members It was agreed that this Council should be purely of an advisory nature, should deal with matters connected with the day-to-day work of the library, and should not discuss any question relating to the top-management, the staff, the salary scales, etc True to this objective, the Staff Council of the Madras University Library dealt with the matters connected with the systematization of the work of the different sections, problems involving intersectional relations, and methods for the efficient and useful service of the library to the public. The Council used to meet once in a month.

31 SECTIONAL COUNCILS

Ranganathan believed in the existence of some creative power even among the last of the members of the staff He was keen that tiny creative ability should be stimulated to flower. He believed that at certain levels of details, it was the juniormost member that could make the best contribution At the same time, he realised how shy such juniors were to express themselves in a meeting of the seniors and how the seniors would slight and suppress them He therefore instituted a Sectional Council for each section It consisted of all the members of the section concerned The head of the section was its Chairman. It met once in a month to solve its own internal problems Ranganathan himself invariably attended all the sectional meetings as an observer and gave them help wherever found necessary. He also helped each sectional meeting to formulate the problems of an intersectional nature for solution at the Staff Council For example, the Sectional Council of the Reference Section often brought up the need for certain cross reference entries The Sectional Council of the Technical Section would solicit the evaluation by the Reference Section of the new placings given to new subjects The Sectional Council of the Maintenance Section would invite the attention of the Periodicals Section to newly announced periodicals and cumulative indexes and to the way in which a completed volume should be assembled or split up before accessioning.

32 Annual Meeting of the Staff

Another plan devised by Ranganathan to cultivate the 'bee-hive spirit' among the staff was to bring them together whenever there was an occasion for such a meeting The University Library worked on all the days of the year from 7 am to 8 pm But it had to be closed for a couple of days in each year for the Annual Convocation of the University which took place in the hall occupied by the library. These forced common holidays for the entire staff were taken advantage of and one of these days was utilized for the meeting of the entire staff

This meeting was one of informal get-together for exchange of ideas and experiences It was needed a "social day" All the members of the staff met at the residence of Ranganathan He played the host on such occasions The day began with a rich feast at 10 am Thereafter, the members used to relax till the lunch time at 2 pm This interval of about 4 hours enabled the members to spend much of their time together and to discuss casually the problems each one of them had After lunch there was a session of a less informal kind This usually began with the reading of a paper written by a member of the staff followed by the discussion on the points arising out of that paper Opportunity was given to each one of the members to take part in this discussion In the first meeting, for example, the late C Sundaram presented the paper *Reference Work in the modern library*[8] This paper gave rise to many interesting problems some of which are dealt with in the later sections of this paper

34 True Democracy

The unskilled staff too attended the annual meeting They too were allowed to bring up their own problems There was indeed true democracy This exchange of ideas with the unskilled staff led to a considerable rationalisation of their work They too felt honoured and elated by this participation

35 Esprit de Corps

True to the expectation of Ranganathan, the institution of the Staff Council, the Sectional Councils and the Annual Meetings brought about a better understanding among the members of the staff. The junior members also began to think along helpful lines about the work each one of them was doing and contributed their mite towards the improvement of the organization and administration of the library. I remember how my colleague, the late R Krishnaswami Rao, came forward with suggestions for the choice and rendering of headings in the case of certain difficult books and explained the gadgets invented by him to keep the catalogue cards neat In short, the entire staff imbibed the 'bee-hive spirit' The sense of 'high and low' was exercised Everyone realised that he could make his own original contributions to the sum total of thought All realised that they should work as a team and that the end and aim of all their work was to help every reader to get his book and every book to get its reader, without any loss of time A sense of common ownership of the work of the library developed rapidly Each one respected the value of the work of every one else Even personal holidays were regulated by mutual adjustment so that the work of the library could go on normally at all times

4 Benefits of Cross Fertilisation

Though Ranganathan would take responsibility for all the decisions made, he used to put all his draft decisions first before the Sectional Councils concerned Then, he would place them along with the minutes of the Sectional Councils at the monthly meeting of the Staff Council He would invite a frank discussion at all stages. The resulting cross fertilisation enriched every kind of work be it book selection, accessioning, three cards system for periodicals, binding instructions, periodical re-arrangement of subjects in the stack room, any other item in administrative routine, classification, or cataloguing.

41 The book "Library Administration"

The history of the preparation of this classic *Library administration* (Ed 1, 1935) illustrates his characteristic way of "working with the staff". He gave copies of the first draft of each chapter to the sections concerned The sections tried out the planning, the job analysis, the routine, the diaries prescribed, the correlation with other sections, the time-table including the "junction moments" and the "pick-up work", the forms and registers and the filing system prescribed in the draft After trial for the agreed period, the Sectional Council concerned discussed the findings, its minutes were reviewed by the Staff Council, and finally Ranganathan confirmed his draft or carried out amendments in the light of all such experience

42 New Placing in Classification

New subjects emerge from time to time in the universe of knowledge These have to be analysed into facets and phases The analysis occasionally discloses the need for new isolates and even a new schedule of isolates Ranganathan's practice was to make a provisional decision on these points, bring them up for discussion in the Sectional Councils and in the Staff Council, and finalise the new placings in the light of the discussion at their meetings An example of this is *Some new placings in the Colon Classification* presented to the All India Library Conference, 2, Lucknow, 1935[4]

43 Classified Catalogue Code

Most of the draft rules of the Classified Catalogue Code were similarly discussed by the Staff Council and the Sectional Councils concerned between 1927 and 1934 The Technical Section would bring out the practical difficulties in carrying out certain rules or report on the satisfactory nature of the other rules The Reference Section would make its contributions from the angle of the helpfulness of the entries prescribed by the rules Similarly the Book Selection would underline the rules of help in or necessary for the avoidance of unintended duplication of books within books, books with different names, and books within periodicals

44 Idiosyncrasies of Periodicals

The idiosyncrasies of periodicals are well known They show forth from all angles—administrative work involving their receipt, registration, and chasing of delayed supply or non-supply, cumulation of the completed volume, preparation for binding, classification, and cataloguing There was no helpful guide on these points when we started work in 1927 The Three Cards System[5], the binding instructions, the bringing together of different periodicals on the same subject and sponsored by the same body, and the elaborate and nearly exhaustive rules for cataloguing them[6] were all first discussed by the Staff Council of the Madras University Library at the draft stage and finalised with the aid of the resulting cross fertilisation

45 SHELF-STUDY

The spirit of team work and the benefits of cross fertilisation were demostrated in another sphere of the work in the library There were many occasions when the Reference Section was unable to cope up with its work. As every other section was also working with a minimum staff, it was not possible to spare an additional member to the Reference Section. The Staff Council considered this problem from various angles and decided that every member of the staff, to whatever section he may belong, should get himself acquainted with that part of the resources of the library which was frequently made use of by the readers To carry out this resolution, each member of the staff was assigned a subject and it was his first duty every day to go to the shelves containing the books in the subject assigned to him and to familiarize himself with the titles. When he was sufficiently familiar with them, another subject was assigned to him Thus, in due course, most of the members of the staff were fairly familiar with the entire resources of the frequently used part of the library Thereafter, wherever there was a rush of readers in the stack room, and the Reference Librarian wanted extra help the members of other sections gladly shared the work with the Reference Section By this arrangement, the staff itself felt enriched and the service of the library also got enriched beyond measure This was the result of an agreed joint decision of this Staff Council and the Sectional Councils

5 Binding Section

The creation of a Binding Section in the Madras University Library was the result of the deliberations of the Staff Council It was found that some of the periodicals were in loose numbers ever since they were acquired The monthly batches of books sent to the binder were lying with him for a considerable period of time on account of difficulties at his end Even among the books returned by the binder, many volumes had to be kept apart without restoring to the shelves on account of mistakes committed by the binder All this could not be controlled by B Narayanaswami Naidu whose chief function was to maintain the accounts of the library In addition to his job as the accountant, he had not only this binding work but also other odd jobs to look after. In spite of his sincere devotion and hard work, the Staff Council noticed that he could not look after the binding work as efficiently as required by the library Hence the Council suggested to the librarian the transfer of the work to some other member of the staff After a considerable discussion, it was found that no member of the staff could do the work in addition to the duty already allotted to him. Finally it was decided to assign the work to the late M S Sundaraman and put the binding section in his charge. He systematically analysed the jobs connected with his section and evolved a routine for the smooth working of the section Of course, in all this he was helped continuously by Ranganathan The job analysis, routine etc, of the work of the Binding Section contained in the *Library Administration* are based on these findings[7].

6 Maintenance Section

With the growth of the library and an increase in the number of readers, it was found that the books in the shelves should be arranged so as to fulfil the Fourth Law of Library science 'Save the time of the reader' Hence most of the frequently used reference books were picked out and located in the reading room The recent additions were kept in the front row of book shelves in the ground floor of the stackroom for a specified period to increase the chance for their arrival being known to the readers Even the other volumes in the stack room were re-arranged in the measures of their demand by the readers, *viz*, the volumes in great demand were kept in the ground floor These formed the "main collection". The "secondary collection" made of less used books was put in the second tier Those in least demand were stacked in the still higher tiers. Further, the arrangement of subjects were judiciously varied and readjusted from time to time, so as to be helpful for readers to find their books and the books to find readers This policy gave rise to a number of problems for the different sections These were brought before the Staff Council and it discussed the problems in great detail and found that they could be solved only by entrusting the maintenance of the books in the several collections to a separate section to be called the Maintenance Section This section took over also the work connected with binding This Section was placed in charge of V Jagannathan. Within six months after working in the section, he recorded his experiences in a paper entitled *Genesis of the Shelf Section and its potentialities* and read it before the third General meeting of the Staff This paper[8] brought out many interesting points which were not visualized when the Section was created This is another example of the cross fertilization brought about by the Staff Council

7 Creative Work of the Staff

The Staff Council was also responsible for stimulating the creative faculty of its members and encouraged them to publish their experiences in the *Modern librarian* and the *South Indian teacher* from time to time Ranganathan helped the members to put these papers in proper shape and got them published. This practice of his developed a professional consciousness in the staff and induced a desire to participate in professional conferences also. The symposia found in the *Proceedings* of the successive All India Library Conferences were the result of this practice of Ranganathan The following list of papers on 'Reference Books' contributed to the Fifth All India Library Conference in Bombay in 1942 will give an idea of the scope of such symposia[9]

1 Reference books · Their definition and value by S R Ranganathan

2 Reference books and time factor by K M Sivaraman
3 Reference books and nascent thought by S Ramabhadran
4 Reference books A statistical study by A Rajabhupathy
5 Reference books across the counter by S Ramabhadran
6 Reference books and their internal arrangement by K M Sivaraman
7 Reference books and Governments by S R Ranganathan

These papers themselves were the result of the follow up work on the *Bibliography of reference books and bibliographies* brought out by Ranganathan and Sivaraman in 1941 as one of the publications series of the Madras Library Association Such a participation in collective thinking and team work developed the self confidence and the creative element in the personality of the members of the staff and some of them became regular contributors to periodicals and cooperated with Ranganathan in his literary work This is how the Staff Council in the Madras University Library helped to form the nucleus of the renascence in Library Science in India

8 **Irony of Fate**

The Staff Council did splendid work in the Madras University Library from 1927 to 1937 During this period, life was pulsating in every member of the staff and team work in the spirit of the bee-hive reached its height But one is led to read an element of "irony of fate" in a passage written by Ranganathan in 1935 He then wrote "The wastage in human personality is the most subtle and elusive It is usually least provided against, although it is the most devastating When the lower qualities and emotions—a false sense of prestige or the fascination of tyrannical methods blind the man at the head of affairs, they cause much damage to the personality of the staff At moments of political and communal recriminations and readjustment the problem comes to be deliberately ignored"[10] After 1937, all these dangers descended gradually on the "bee-hive spirit" of the Madras University Library and the Staff Council promoting it The starting of World War II added to the glumness of the situation The Staff Council was paralysed and utterably killed But none of these things could take away from the good achievement by it when it existed The team work of the staff continued However, Ranganathan left the library in 1944

9 **Migration of Team Spirit**

The team spirit, that had grown with Ranganathan appears to have migrated with him to other parts of India and to other countries Indeed, its achievement has been of far greater dimensions and of far greater effect, after 1947.

The following five books are outstanding examples of the intensified team work centering round Ranganathan·

1 Public Library provision and documentation problems (1951) by 15 authors.
2 Depth classification and reference service and reference material (1953) by 35 authors
3 Union catalogue of learned periodicals in South Asia, Volume I (1953) by 21 authors
4 Social science research and libraries (1960) by 9 authors
5 Documentation and its facets (1963) by 32 authors

91 Library Research Circle of Delhi

The Centre for research in library science was shifted to North India when Ranganathan was appointed Professor of Library Science in the University of Delhi in 1947 During the period of about eight years of his Professorship, he stimulated many young men to take to team work and helped them to do research in library science The achievements of the Library Research Circle of Delhi founded by him are well known The cumulative effect of all is the existence today of a considerable volume of literature on library science written by Indians Ranganathan had foreseen that India should have a first rate library periodicals to disseminate the results of our research circles Hence he took considerable efforts to establish the *Annals of library science* Started in 1949 as an organ of the Indian Library Association, it has been continuing as an independent research periodical of a high order since 1954 The *Library herald* is another organ in India intended to nourish the new voices in the profession It began in 1958 The *Herald of library science*, sponsored by the Sarada Ranganathan Endowment for Library Science has become a leading periodical on the subject since it appeared in 1962

92 Study Circles

In recent years, Ranganathan has promoted team work in library service by helping in the formation of Study Circles in Aligarh, Jaipur, Delhi and Trivandrum A monthly meeting of the librarians of the City of Madras was established by him in 1960 to bring back team work to Madras An informal meeting held on a Sunday in September 1948, at the Chaucer House in London —the participants being Foskett, Palmer, Ranganathan and Wells—has now flowered into the Classification Research Group of London

93 Hope and Delight

One of the old students is adding to the hope and the delight of Ranganathan in keeping alive the torch of team work P N Kaula, now Chief Librarian and Head of the Department of Library Science in the Banaras Hindu University, had made team work to achieve a great deal both in the Library of the Central Ministry of Labour and in the Delhi Library Association He is now doing similarly in Varanasi *Library Movement in India* (1957) by 10 authors is the first book to come out of his enterprise in team work. The reorganisation of the biggest University Library in India on the latest techniques is the result of the team work under his leadership- The creation of the Library Research Circle in Varanasi and powerful professional organisations in Delhi and UP are some other examples of his team work Ranganathan frequently refers to his work with joy and often prays that many other librarians of India should come forward to promote the team work and keep up the library renaissance through which he has been living with delight ever since he entered the profession

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CHAPTER P2

Scientific Management of Libraries

D N SHUKLA

1 Management

In any scheme of work, the management becomes very important, for without sound management the actions remain incomplete. The magnitude of any kind of undertaking in the Space Age is so vast that without scientific planning, it results in a failure. Planning means the conscious efforts to allocate our minimum resources to the best of use. As we all know, time is short and nature is niggardly, we ought to concentrate our energy, human as well as material, in such a way as to yield good results. Therefore, the management of library demands human potentiality in order to be useful to the community. Especially universities are the centre of civilization and culture from which emanates the potential leaders of the society. This is the reason why the sound management of libraries—a university, public or research—are worthy of attention.

2 Library Management

Many of our libraries are suffering from the paralysis of one kind or the another due to the paucity of adequate resources. Especially man at the helm of library affairs should be one who can command and guide the ship safely. It is the quality of man that plays an important role in the set of sound library administration. We are a developing nation in which we shall be having so many seats of education and culture. It goes without saying how important the personality factor counts in a big institution.

3 Functions of Management

A knowledge of the true functions of library management should enable the library profession to select candidates for managerial positions much more accurately than is possible at the present time, and it should be possible to work from this frame work or similar basis, towards the formulation of a comprehensive and definitive theory of library management. Thus the library management should be performed by the persons who should also possess the knowledge of sound business principles Here it becomes quite imperative that there is a need for some means of directing librarians to those parts of management writing that have applicability to library work.

4 Principles of Management

Library is a growing organization The growth of the library should be tackled with the adequate human potential at the other end so that the unevenness may not creep in In a developing library, the administration should be geared on the basis of sound principles looking to the future requirements of the community When the administration does not change in time with the developing organism, the un-balanced tendencies crop up and as the time passes, the limbs of the body become paralysed Therefore, library administrators should be acquainted with the management literature, and of the orientation in the management field What we require at present is the analytical and sophisticated writings on the subject of library management so as to guide developing libraries from being paralysed There is a real lack of bridging literature *ie* articles that relate the concepts and practices of professional management to library situation

5 Adjustment

And lastly, how can this be adjusted to the demand of the readers? Adjustment should be natural If the library professionals are trained and equipped with the necessary requirement, the managerial or administrative functions can be galvanised into the effective channels of learning It is very difficult to unlearn a wrong method, therefore, we should be careful to learn right methods, to learn in a sound natural manner Learning of any kind that we cannot make use of is valueless And even correct learning is profitless unless we set it to working for us

6 Reverence to Dr Ranganathan

If I have modestly contributed to the prevailing literature of library science to be useful to us, then my duty is done With respect and regard, I dedicate my few ideas—however lame they may be at present—to revered Dr S R Ranganathan

CHAPTER P3

Role of the United Nations Libraries in the World of Librarianship

A BREYCHA-VAUTHIER

1 U N Libraries

ALBERT Schweitzer, the great doctor from Africa and Nobel Prize winner, once expressed a pregnant truth by stating that man starts by building his house but that ultimately it is the house which builds the man.

Applied to the field of United Nations libraries this means that once these libraries have been built up by their organizations they in their turn influence the organization, by supporting its programmes and efforts—and also successive generations of librarians, particularly those whose specialization lies in the fields similar to those of our libraries. That we are put in the position to exploit these vast possibilities we owe to the generosity and vision of the Ford Foundation which one generation later has so fittingly followed the trail blazed by John D Rockefeller and from which we benefit so greatly today.

11 CO-ORDINATION

If we start now to examine what has been built up on the basis so generously provided, we find many and varied services which characterize our reciprocal relations. For co-ordination between United Nations libraries is probably a less arduous problem than in other domains of the United Nations family, and this is perhaps the reason that after having agreed on a number of principles, the Library Co-ordinating Committee of the United Nations Organization faded away with the increasing collaboration between the respective libraries; rising statistics of users, acquisitions and loans and also reference questions answered, show the usefulness of this co-ordination for the United Nations work and the promotion of research and scholarship.

2 U N Headquarters Library

Within the framework of an inspiring bibliographical programme the United Nations Headquarters Library publishes an invaluable master key to all documents of the United Nations system, namely, the monthly *United Nations documents index*—UNDI to its numerous friends—with its monumental cumulative index volumes For you at Headquarters as for us in Geneva, such a publication is an essential instrument of bibliographic control as most of the specialized agencies are located in our part of the world. This fact of location also greatly influenced the United Nations Economic and Social Council when it laid down in 1949 the lines on which the Geneva Library should operate, and decided then that its name should be the United Nations Central Library in Geneva, thus underlining our particular responsibility to the specialized agencies Not only our loan figures but also our consultations on purchases and bibliographical aid show the effectiveness of this policy The name, of course, applies to our relations with our Headquarters Library although distances have to be and are taken into account, and the fundamental survey of our good friend, Verner Clapp, marked for both libraries the road on which we have since steadily progressed

3 **Co-operation**

Other problems arise in connexion with the facilities surrounding a library. In New York with the world's finest libraries on the doorstep, facilities are available to the United Nations which we in Geneva must organize ourselves We are able, however, in the specialized fields covering the multiple aspects of health and labour questions, to draw upon the fine resources of the rich holdings of the World Health Organization and the International Labour Office, both for current material and also for all other earlier documentation, since both libraries have inherited superb collections of international bodies which they took over, and which, in some instances make them even older than ours

31 INTERNATIONAL LIBRARY

No international library can or even should attempt to stand by itself and a generous give-and-take is our natural condition of existence That there is close and world-wide co-operation between international libraries in the United Nations system may be clearly seen but there is another and not less essential aspect, namely, the building up of good relations with the libraries of our host country Let us view them for an instant from the personal angle Relations with library schools for example, make possible the sending of library students to international libraries, the welcome result is that these future librarians acquire a knowledge of an international library and its problems while we are able to examine more closely the qualities of potential future collaborators. This is especially true in Geneva where a number of special catalogues have been elaborated by these students as their diploma works and where such useful bibliographical tools are a permanent memorial of their association with us

32 Other Fields of Co-operation

There are various other fields also in which signs of closer integration of international libraries can be seen There is a growing number of us who are not only members of their national library associations but also work in the professional bodies of their host countries These personal contacts which bring about reciprocal relations and mutual comprehension of their respective tasks open the doors of international libraries and bring about collaboration with the libraries and bibliographic institutions of the host country Amongst the activities of the United Nations Headquarters Library listed in its last annual report one finds mentioned its participation in an institute on periodical indexing, a seminar on United Nations documentation and another seminar on Latin American acquisitions, all excellent examples of its wide range of activities and the services an international library can render to its colleagues On the same lines we in Geneva are closely associated both with the International Federation of Library Associations, the Geneva Library School and the Post-Graduate Institute of International Studies, with whom we are just now developing for its second year, a study programme for their African students diplomats Participation in union catalogues and in union lists of foreign periodicals received in the libraries of the country which have become an indispensable instrument of research all over the world—and at the same time a useful guide to possible economics—is a natural sign of this growing integration It should nevertheless not be forgotten that international libraries follow rules other than the libraries of the country itself and that if there is greatness in the domain of international libraries, we must also remember the elements of instability arising from their particular situations and which may endanger them

4 Assistance in Co-operation

I should like to mention here in passing, not so much as a United Nations librarian, but as a member of IFLA'S Executive Board, the problem of those international libraries which are not in any way affiliated to the United Nations system We have seen that there is sound co-operation between our libraries and this also applies to a greater degree to our relations with the libraries of our host countries, but the increase of international organizations both in number and importance brings a growing number of their libraries to the forefront For one reason or another, they often remain strangers in the host country, while their divergent interest and status also often prevent close relationship one with the other As we believe that the situation is detrimental both to the interests of the country concerned and to the specific libraries and organizations themselves, we are trying to remedy it by giving them a possibility of working in various IFLA Committees where they can explore possible solutions which might in the long run be profitable to them As I said, this is no direct responsibility of the United Nations, but is, I think, a general international library problem in which we all have some concern

5 Library Facilities

International libraries are a complement and enrichment to the libraries of any country, particularly through their holdings of otherwise unavailable government documents, or by their complete collections of documents of international organizations which are not to be found in local depository libraries The fact of an international library complementing the library facilities of their host countries and the reciprocal services is rightly understood by many, a fact which we are happy to say is recorded in local library guides which start to list also one or the other of the large international libraries in their area For this is a realistic conception of the participation not only in the duties but also in the rights and services of an international organization We at the United Nations Libraries experience this helpfulness in many ways and I am happy to acknowledge at this meeting which unites so many eminent colleagues how much our libraries owe to them and their respective countries.

6 Dag Hammarskjold

My final word to you is a tribute to Dag Hammarskjold, our beloved and greatly admired Chief, he was the fifth Secretary-General under whom it has been my privilege to serve, and as a junior colleague of his brother, I was already somewhat familiar with his ways even before he took up the heavy reins of Secretary-General of the United Nations His was a feeling of understanding of the deeper sense and potentialities of our profession and on the many visits he paid to the Geneva Library and our Museum of Diplomatic History, he invariably over-ran his pre-arranged schedule

61 GUIDE FOR LIBRARIES

After his tragic death his nephew sent a message to Martin Buber, the great octogenarian philosopher, in order to inform him that a German and English copy of his book, "I and Thou" were found amongst the meagre baggage which our Chief carried on what was to be his last flight In his few spare moments, Dag Hammarskjold worked on a translation of this text into Swedish In the chapter which treats of the relationship between man and man, and man and institutions, one reads "We are moulded by our pupils and built up by our works" Let such be the motto of the United Nations Library, when it forms its librarians mindful of their duties to their colleagues and to the world Libraries are ultimately and fundamentally a human problem and such librarians will become the pride of their profession having been trained to the highest standard of professional duty through their daily contact with the immense challenge which lies before our Organization and which it is our grave privilege to serve.

PART Q

REFERENCE TOOLS

CHAPTER Q1

Encyclopedists Beware

LOIUS SHORES

0 **Publication of Encyclopedia**

LAST year 25 percent of America's billion dollar book business was accounted for by encyclopedia sales. Although the exact number of new sets placed in homes and libraries is unknown, at least five major encyclopedia publishers sold no fewer than 100,000 sets each, at a list price of £100 or more. Countless other ventures ranging in price from 99 cents per volume in supermarkets to several hundred dollars per whole library complete with bookshelves made encyclopedias the real "strikes" of the new gold rush in publishing. At this writing "new" encyclopedias are being announced daily, some genuinely appearing for the first time, and others based upon older American, British or other national undertakings, with minimal or maximal updating depending upon the competence and integrity of the publisher.

01 ENCYCLOPEDIA RANGE

The current encyclopedia range is attributed to various causes. A national excitement about information, especially in the sciences, but also in politics, psychology, art, and even philosophy is attested by public library circulation statistics. An even greater parental urge to provide better educational opportunities for the children is also responsible. The salesman who has just sold an encyclopedia next door, has a powerful argument when he says, "You don't want the Joneses' youngster to make higher grades in school than your children?'

02 SALES

Flattering as these causes are to our national mind, they are, in the opinion of many, less important than the sales force that pushes its feet into the front doors of countless American homes. Encyclopedias, unlike most other books, are sold directly by the publisher's representative to the consumer. The so-called subscription book method of selling differs from both trade and textbook distribution. The former follows the regular trade channels, from publisher to jobber to retail bookstore to customer. Through the device known as "adoptions" textbooks are sold to entire local or state school systems in quantity. Subscription books unlike either trade or textbooks depend upon personal contact with the householder in his own living room by a representative of the publisher

03 Booksellers Pitch

Because of the difficulty of gaining admission to a home, the subscription book salesman depends upon a "door opener" which appeals to what a marketing expert has referred to as the "larceny in our soul" Basically, salesmanship contends all of us want a bargain, or some advantage over our neighbour, or a bit of extra flattery, or status. The result is what the book peddler calls "pitch".

031 VARIATIONS

The pitches have many variations Some of the most common I have attempted to summarize in my books, *Basic reference sources* and the earlier Basic reference books A common one is the package of "throw-ins," under which various additional premium "bargains" are added to the encyclopedia, for "little or no additional cost" Although our national pragmatism tells us nothing is given away, we succumb readily to premium bait, as the current stamp epidemic will attest

Still common is the testimonial letter Under this approach the encyclopedia is offered free for a letter of endorsement In a moment a weakness, the small town official, who is suddenly convinced that his opinion has become important to the world, signs a contract that binds him to keep the encyclopedia up-to-date by purchasing year-books or supplementary services for ten years In the end, the total cost of these supplements is frequently more than the encyclopedia is worth

Most salesmen arrive armed with display equipment, such as the "stretcher" which exhibits the magnificence of the binding as a piece of furniture for the home Included also are numerous broad sides and some reprints But basic is what the representative calls his "pros" or prospectus This is a collection of pages from the set, apparently chosen at random, but actually with deliberation Librarians call this a "mongrel" volume and never buy from it, insisting on seeing at least one regular volume if the whole set isn't immediately available

There are other pitches, depending upon the ethics of the salesmen Because of the size of the sales force and the difficulty of door opening, all publishers, even the good ones, are involved in cases of reprehensible practices from time to time. The Federal Trade Commission has had cases against nearly every encyclopedia publisher at one time or another But the FTC has been no more concerned or vigilant than the legitimate publishers themselves

1 **Standardization**

The American Text Book Publishers Institute through its Reference Division has worked steadily towards standards in sales methods as well as in reference book quality In cooperation with the American Library Association, it activated a committee on terminology which defined such previously uncertain terms as "continuous revision", "new edition," and "completely revised." Through various committees on fair practices efforts to develop sales codes have met with some success.

2 New Approach in Selling

In addition, individual publishers of the major encyclopedias have on their own been experimenting with new approaches to the American house holder Some have enlisted former officers in the Better Business Bureau to help to develop sales method in keeping with the quality of their product In an effort to attract a higher type of representative, college students have been employed during the summer as well as school teachers But in the latter case, an ugly note has appeared in alleged pressures put on parents of pupils Some school systems forbid teachers from selling encyclopedias in their own school districts

21 Clean Approach

Despite efforts by the legitimate encyclopedia publishers to raise the level of their sales approach, the going is hard One publisher tried what is called a "clean" approach, concentrating strictly on the quality of his book During an experimental single month, one community purchased over 100 worthless sets sold through the dirty pitches, in preference to recommended works sold ethically at the list price indicated in *Cumulative book index* Bitterly, one of the men said to me, "The American public wants to be taken If we don't use the same dirty pitch every good work will soon be out of business." But his boss insisted we are going to continue our efforts to educate the American consumer on encyclopedia buying To this end the ATPI has issued a number of publications on the evaluation and use of encyclopedias

22 Efforts of A L A

Even more helpful in this respect has been the American Library Association Through its thousands of public, school and college librarian members all over the United States, the ALA has undertaken to educate library patrons on the evaluation, use and selection of an encyclopedia In 1930, the Association activated the Subscription Books Committee which reviews encyclopedias in its respected *Subscription books bulletin* Over the last three decades, the Committee and reference librarians have developed criteria for the evaluation of an encyclopedia I have summarized these as seven in *Basic reference sources*, seven that should be considered by prospective purchasers of encyclopedias and seven that certainly should be uppermost in the minds of publishers and editors who undertake to design new encyclopedias

3 **Challenge to Creative Efforts**

Literary criticism will record that no single form of literature is more vulnerable than the encyclopedia From time immemorial the encyclopedia has challenged some of the best creative effort the world has known Aristotle, Pliny the Elder, Isidore, Bishop of Seville, the Dominican Vincent of Beauvais, Dante's teacher, Brunetto Latini, William Caxton, Ringelberg of Basel, Johann Heinrich Halsted, credited by some with the first modern encyclopedia, Francis Bacon, Voltaire, Diderot and his famous cortege of encyclopedists are only a few who influenced the evolution of the book form that has moved to a position of educational prominence today

4 **Critiques**

All the way encyclopedists have been beset by critics The effort to summarize all of man's knowledge has been fraught with the hazards of change The famed French *Encyclopedie* was likened by some of its critics to a Tower of Babel and by others to a harlequin's coat Its stormy history was in no small part due to its lack of a consistent editorial policy and to its frequent advocacy of causes

41 CONFLICTS

The seventeenth century saw a curious competition between an encyclopedist, Louis Moreri (1643-1680) and his critic, Pierre Bayle (1647-1706) When Moreri issued *Le Grand dictionnaire historique* in 1674, Bayle responded with a *Dictionnaire historique et critique* designed as a compendium of errors and omissions in Moreri Unperturbed, the encyclopedist took advantage of Bayle's research and reissued a revised edition of his own work

42 ENCYCLOPAEDIA BRITANNICA

When the *Encyclopaedia Britannica* in 1928 courageously reformed its British objective of serving the specialist with an American purpose of providing information for the layman, the critics went to work Almost universally, reviews began with nostalgia for the "scholarly Ninth Edition" Authors launched literary careers by searching for errors in the *Britannica* One of the notable examples was the book *Misinforming the nation* by Willard Huntington Wright, who later assumed the pen name S S Van Dine and acquired a fortune writing "whodunnits," no doubt as a result of the experience gained sleuthing through the *Encyclopaedia Britannica*.

43 WITCH HUNTING

The tradition of encyclopedia "witch hunting" continues today as a popular critics' exercise. With all of man's knowledge as its scope, and the acceleration of discovery and invention as its nemesis, the encyclopedia today is particularly vulnerable. Any one, therefore, having the desire to enter the profitable encyclopedia field would do well to contemplate the hazards and beware of the pitfalls.

5 Criteria for Evaluation

An analysis of three decades of reviews by the stern Subscription Books Committee confirms the importance of the seven criteria for evaluating an encyclopedia. But the analysis points out also that there is considerable difference on some of the elements in these criteria.

51 AUTHORITY

Take the criterion "authority," which is usually first among the seven. The element of sponsorship can be determined on the reputation of the publisher and any cooperating agencies. But the elements of editors and contributors poses immediately choices between "names" and specialists, between scholars who know their subjects and writers who can communicate. The "Trade Winds" column in the *Saturday review* recently called one encyclopedia to account for including an article by John F. Kennedy, even though the subject on which he wrote was one of his acknowledged specialities and he was not at the time President of the United States. At the same time the columnist praised another encyclopedia he liked because of the great number of celebrities among its contributors.

511 CONTRIBUTION

Even more difficult for the editor is the scholar-specialist who simply cannot communicate. Many years ago, *Compton's pictured encyclopedia* had an article on Egypt prepared by the distinguished Egyptologist, James Harvey Breasted. Certainly the first draft of his article would have been accepted by any of his peers, but it was perfectly unintelligible to the young adult for whom the encyclopedia was intended. After some fourteen rewrites, scholar and editor finally agreed upon a version.

512 DIFFICULTY IN COMMUNICATION

A more embarrassing incident occurred on *Collier's encyclopedia*, to illustrate the fact that an authority may know his subject and yet be unable to communicate it to the uninitiated After considerable persuasion a name scientist was induced to prepare a piece for the set At that time Crowell-Collier was publishing three popular magazines as well as a number of other publications What must have happened in the mail room one Monday morning was the accidental misdirection of the scientist's article, not to the encyclopedia, but to *Collier's magazine*, where the encyclopedia-coveted contribution became just another unsolicited manuscript Subjected to reading by an editor of a mass medium, the article promptly got a printed rejection slip, with the usual pat on the back, "Keep trying young fellow, and you may make it one of these days " Nothing can describe the indignation of the scientist as he expressed it to the encyclopedia editor in a long distance collect call

52 SCOPE

But the crux of encyclopedia evaluation is found in the second criterion, "scope" Of all man's knowledge what is most significant ? What shall be included and what omitted in a work limited by a specified wordage *Early* encyclopedists made their decisions on the basis of the scholar's so-called "circle of knowledge." In the mind of the medievalist there was no doubt what every educated man should know But as education was extended to the masses the circle's circumference expanded to include popular interests Inevitably subjects like "Absolutism" found themselves crowded in the same alphabetic sequence with "Baseball," and Abelrd's importance had to be weighed in relation to the popular interest in Babe Ruth

521 TECHNIQUES FOR SUBJECT SELECTION

Various techniques for subject selection and word allocation have been developed by encyclopedists One device is the frequency count of the appearance of subjects in various sources and reference tools Another is the pooled judgements of a board of scholar advisers A third is an analysis of the curricula of schools and colleges Still a fourth approach is through the indexes to magazines and newspapers Inevitably, differences develop on relative importance of subjects and space allocations I recall an afternoon of deliberation among editors and advisers as to which President of the United States deserves the longest biography. Advocates of Washington and Lincoln fought vigorously, but in the end the most wordage was assigned to the President who had served the longest and experienced during his administration the greatest war abroad and economic revolution at home

53 TREATMENT

Having selected the subjects and allocated the space among them, the encyclopedist must beware of two of the greatest hazards in encyclopedia building Both are related to the third criterion of "treatment." Contributors are expected to write readable and objective articles No matter how erudite the contribution is, it has failed if it is not understandable by the lay reader for whom the encyclopedia is intended. But readability is not simple. What is readable to a college graduate may be incomprehensible to the adult with less than six grades of education Furthermore, many subjects require elementary foundations For example, how do you explain calculus to a reader who has not gone beyond long division in mathematics ? Or at the other end, how do you keep from being so elementary that the graduate student is not convinced the encyclopedia is worthless. More than the critic is aware, the conscientious encyclopedist searches for article patterns that will appeal to the wide range of differences fostered by the trend to universal education

531 OBJECTIVITY

But even more hazardous is the treatment element of objectivity Do you know there are two major encyclopedias without biographies of Jesus simply because of differences among Catholic, Protestant and Jewish scholars ? The article on "Baptism" is reviewed and revised annually because of variations among denominations But religion is only one of the hazardous areas In economics and government the articles on "Capitalism" and "Communism" rarely satisfy both liberals and conservatives The treatment of the Negro alternately brings indignation from the NAACP and state departments of education in some Southern states When physicians and clubwomen in American communities battled over flouridation of water supply, there was nothing for the encyclopedia to do, in some instances, but publish separate articles representing both sides

532 ACCURACY

Whatever imperfection the modern encyclopedia has, the editors of the good ones, at least in the Western nations, are dedicated to presenting both sides of controversial issues Accuracy and truth become of necessity a mission of the devoted encyclopedist Whatever errors occur are the result of accident or the imperfection of man As an example of the fury with which even the lay critic pounces on imperfection, one encyclopedia in its article on Altoona, Pennsylvania, reported that city was located 100 miles east of Pittsburgh. An indignant subscriber wrote "I drive it once a week and my speedometer registers exactly 96 miles every time from center to center If your encyclopedia is that inaccurate on this subject, how can I trust it on other subjects ?" Fortunately the editor was able to cite in his reply that a check of five standard geographical reference tools offered five difference distances between the two cities

54 ARRANGEMENT

In addition to the dilemmas in authority, scope, treatment, the encyclopedist must beware the traps of arrangement Generally, encyclopedias are arranged alphabetically or are classified If the latter, the arrangement is usually satisfactory to no one but the classifier But the alphabetic arrangement is not simple Early the decision must be made whether knowledge will be divided up into very small topics or treated in larger relationships If the latter, detailed analytic index locating the smaller subjects is essential, if the former, a complementary synthetic index showing the relationships between the smaller topics and the larger subject is helpful

541 AN ANALOGY

The *Encyclopaedia Britannica,* which is a superior example of the work that favors the larger subject, treats some 500,000 different subjects in about 40,000 separate articles This means that the reader who goes for a small topic directly to the alphabetic sequence of articles in the first 23 volumes has no better than two in 25 chances of locating it As an example, one teacher complained he could find nothing in the *Britannica* on "phalanx" The subject is there, however, adequately treated, but under an article covering the broader subject The choice of subject headings for separate articles, the selection of representative "see" and "see also" headings, and the design of a complementary index that will help unlock the hidden contents of an encyclopedia are more than mechanical challenges to the encyclopedist

55 PHYSICAL MAKE-UP

To the sales force and often to the consumer, the package is much more important than the product To the encyclopedist this means attention to format-binding, paper, typography, make-up, art-in short, the physical make-up of the book More often than believable an encyclopedia has been sold because it matches the living room rug or meets an interior decorator's specifications for furnishings For the librarian, the binding must be physically durable and provide guides to the content of the individual volumes Even a little detail like volume guides can irritate the critic sufficiently to crucify a whole work In the corny example of the encyclopedia volume with the guide words "Hold to Hug" followed by the volume with the guide words "Hug to Infection", it is unclear which volume contains the article on Charles Evans Hughes

551 ILLUSTRATIONS

Much more important is the ratio of art to text It is steadily increasing in most major encyclopedias either because, as Confucius said, one picture is worth 10,000 words or because, sadly, we are becoming an illiterate nation. At any rate, there is a conscious effort on the part of encyclopedists to augment and extend the printed word through illustration. An evidence of this can be found in the abandonment of different paper for text and art. Formerly it was necessary to place half-tone photographic reproductions on calendar paper inserts at some distance from the related text. Now, increasingly, half-tone and even color are interwoven with the printed word. Besides the increase in color, the use of the transparency overlay in connection with such subjects as the anatomy of man, the dissection of the frog and the interior of the internal combustion engine are notable.

552 MAPS

Related to format is the entire map program for an encyclopedia. There are two patterns of arrangement: an atlas, usually in the last volume, amounting in the good encyclopedia to an outstanding map collection and a scatter of maps throughout the set in relation to the subject. In either case, the map program of a good encyclopedia represents not only a capital outlay of several hundred thousand dollars, but a recurring annual maintenance cost that runs into five figures. The major American encyclopedias usually contract with such cartographers as Rand, McNally or Hammond. In some cases, encyclopedists and cartographers have teamed to create the foundation for a separate standard atlas that is identical with the encyclopedia map collection. As an indication of how costly this one phase of the editorial operation may be, every major encyclopedia was forced to replate all of its maps under extreme pressure to include the 1960 census in its 1961 edition.

56 BIBLIOGRAPHY

A sixth encyclopedia criterion relates to bibliography. The dual functions of an encyclopedia are ready reference and self-education. For fact finding, a staccato approach to the encyclopedia dominates. But for the reader who wants to educate himself sequentially in geology or philosophy or interior decoration, a more legato tempo of encyclopedia use is involved. Furthermore, when a student has read all the articles in the encyclopedia, he would like to be guided to other books that he might read in orderly sequence. Consequently, attention to bibliography has always been a major consideration of encyclopedists.

In the past, the contributor used the list of references at the end of his article primarily as documentation, as an indication to his peers that he knew the landmarks of the literature. But in many cases these landmarks were out of print, inaccessible in the community libraries, or in a foreign language. A modern encyclopedia innovation is to submit the scholar's bibliography to library readers' advisers for review, check against books in print, accessibility in popular libraries, to annotate the individual titles and arrange them in some order helpful to the reader undertaking self-education

7 Revision

Perhaps the most hazardous of all encyclopedia undertakings is keeping the set up-to-date Three devices are now used One is known as "continuous revision" and amounts to an annual revision of from five to ten per cent of the content each year Even the lower percentage of the *Britannica's* 38 million words represents changes totalling nearly two million words every year

71 Annual Volumes

The second method of up-dating involves the issuing of a yearbook which summarizes the significant happenings of the past year Every major encyclopedia issues such an annual now, and these current encyclopedias are reference books of far greater importance than the position they now occupy in libraries

72 Reference Service

The third method consists of a reference service which the major encyclopedia publishers offer to their subscribers free of charge In most cases, this means that the owner of an encyclopedia may ask for individual answers to about ten questions a year not adequately covered by the encyclopedia Encyclopedists analyze the recurring questions carefully as a guide to scope evaluation

8 Editorial Staff

Today's encyclopedia operation is editorially greater than ever before Major publishers maintain an editorial staff of over 100 members permanently Included are subject specialists who continuously review content, assign revisions and new articles to contributors all over the world, and edit the incoming manuscripts to conform to style Included, also, are art editors, indexers, bibliographers, research librarians who check and recheck facts, and answer the thousands of questions annually from readers

81 Advisory Board

Supporting the resident editorial staff are several advisory boards Among the most common are the curriculum advisory board, which relates encyclopedia content to course requirements in schools and colleges, the library advisory board which measures the encyclopedia's adequacy on the firing line of reference inquiry in the libraries of school, community and college There are also special advisory groups like those concerned with the religious faiths.

But the most active advisers of all are the score or more subject specialists responsible for balancing the scope of the broad areas of knowledge like literature, history, chemistry, economics, etc. Continuously, these latter advisers review large sections of the encyclopedias and readjust relationships among subjects and topics as new discoveries and emphases dictate With the resident editors they select contributors for individual assignments

82 Suggestion Incorporated

In any good encyclopedia editorial office, continuous deliberation over encyclopedia design goes on Critics would probably be chagrined to discover how many times their criticisms have been anticipated, adopted, challenged, or rejected Every complaint is examined by an analyst and marked for attention in the next continuous revision, if justified

91 **Challenge for Future**

Despite all this concerted effort, the perfect encyclopedia is not yet But the quest continues In the next few years some startling changes may result from the present attention to machine retrieval of information The 1964 World's Fair in Seattle will include something called an electronic encyclopedia, suggesting extension of present data processing procedures into the realm of information dissemination Indexing and up-dating problems, at the heart of many encyclopedia imperfections, today will undoubtedly be solved electronically tomorrow But the fundamental challenge of summarizing all of the knowledge significant to mankind in terms that are understandable by everyone will continue to pique both encyclopedist and critic for many years to come

CHAPTER Q2

The Madras State Bibliography

V THILLAINAYAGAM

0 Introduction

THE Madras State stands first in India in all spheres of life and progress, be it political or social or educational. Adhering to the tradition, the Madras State claimed the first place in the field of library service by providing an act for library service for people as early as 1948 with the name of the Madras Public Libraries Act 1948 which aims to provide for the establishment of public libraries and organisation of a comprehensive rural and urban library service.

A network of District Central libraries, branch libraries and delivery station's was planned as a preliminary step to implement the Act. In addition to this, to help this more, to have a record of intellectual output, to reduce the repetitive work of the librarians, to enable the human touch possible in the reference service, to codify the systems of classification and cataloguing and to help the scholars, publishers and booksellers and librarians, the project of the Madras State Bibliography was started in April 1, 1951 exactly after 15 months of the first fascicule of the British National Bibliography was published which began in January 1, 1950 and 78 months before the much publicised Indian National Bibliography which began in October, 1957.

1 Preparation

The Madras State Bibliography has been prepared from the copies of the books deposited in the Registry of books, Madras under the Press and Registration of Books Act of 1867 as amended by the Madras Public Libraries Act of 1958.

Guided by the Canon of Utility, the preparation of this service project is in two languages. The books in English script and the books in Tamil are bibliographed and published as two separate volumes from the very beginning of the project.

Unlike the other bibliographies this includes everything printed and deposited in the Registry of Books but not newspapers and magazines.

2 Arrangement

The Madras State Bibliography is a classified one consisting of two parts.

The first part of the bibliography—the subject part—gives the details of the call number, author, title, pages, size of the book, date of publication as far as possible, price, publisher and the serial number of the books entered in the subject part The second part—the alphabetical part—gives the author, title and subject-index in one sequence

3 Classification

In the light of the experience of the librarians all over the country, the Colon Classification, which is the only synthetic classification suitable for Indian conditions is used in the Madras State Bibliography.

4 Cataloguing

As a corollary of the classification used, the classified catalogue code as enunciated by Dr Ranganathan is utilised for cataloguing to make the project correct, comprehensive and uptodate

5 Index

The Madras State Bibliography provides an exhaustive index of the author, title, subject, collaborators and the serial number too as entered in the classified part

6 Routing

Books are received from the Registry of Books for the work by the solitary Librarian who is entrusted with this special work The subject entry and other added entries are prepared directly then and there Finally, all of the entries are arranged in card form itself for being printed

7 Conclusion

The finished product thus prepared appears so easily that few think of the arduous and exacting work involved in the compilation of the bibliography.

Due to certain unavoidable circumstances, the Madras State Bibliography is being published a bit late which has progressed up to 1954

However, its usefulness in the field of library service encourages and inspires the work of the Madras State Bibliography to push forward

CHAPTER Q3

Printing and Collections of Printing in Kentucky

LAWRENCE S THOMPSON

0 Introduction

CULTURE came to America at a relatively late date, and it has serious difficulties in surviving. The university established in Lexington in the eighteenth century was a full forty-three years younger than Gottingen. Two years after higher education came to Kentucky, a good proportion of the trustees of the first university were front-line soldiers in the tragic battle against the British and Indians at Blue Licks.

Printing did not come to Kentucky until 1787, two and a half centuries after the black art was first established in North America. Fortunately, printing flourished in Lexington; and, higher education and printing together made Lexington the cultural center of the West until the middle of the next century. A few other older communities, notably Chillicothe, Cincinnati, Louisville, and St Louis enjoyed similar backgrounds, effective antidotes to the alligator-horse-George FBabbitt traditions that are generally attached to America's interior valley.

01 HISTORICAL SOCIETIES

The twentieth century has seen fabulous sums lavished by legislatures on the university libraries of Ann Arbor, Bloomington, Urbana, and other institutions, but the sentimental attractions of the earliest cultural centers have worked to their very distinct advantage. The old private historical societies such as the Filson Club (Louisville), Missouri Historical Society (St Louis), Philosophical and Historical Society of Chio (Cincinnati), and even a comparatively recent foundation such as the Ross County Historical Society (Chillicothe) have benefited greatly from the devotion of the older (and wealthier) families for local history. In their own fields, these historical societies have contributed as much to scholarship as the more spectacular university libraries.

1 University of Kentucky Library

In a different field, tradition has helped the University of Kentucky Library in Lexington, and only in recent years Lexington never developed the great printing industries that grew up in the larger cities of the middle west, but the craft thrived steadily The name of John Bradford, first printer of the West and founder of a printing dynasty in the interior valley, was always revered in Lexington, not only on historical markers but also in the name of the once active John Bradford Historical Society. The University of Kentucky Library, which held only a fair collection of early Kentucky imprints, and relatively few monuments of distinguished printing of the past or present, was nevertheless in a favorable position to become the depository for an important printing collection

11 ANDERSON COLLECTION

Several events occurred about the same time to give a strong impetus to the development of a historical printing center in Lexington. The university's acquisition by legacy of the Samuel M Wilson Library in 1948 gave it an unrivaled collection of eighteenth and early nineteenth Ohio Valley imprints when put together with existing collections A less impressive collection, less spectacular to Kentuckians, but nevertheless basic, also began to come to the University Library about the same time. James A Anderson, an old-time Kentuckian who had forsaken the Blueegrass for Manhattan's asphalt jungle about the turn of the century, had been associated with the noted Gillis press and other New York firms He had diligently saved ephemera and more substantial material as well that drifted into his hands during a half century in the printing business in New York When he offered the bulk of his collection to the University of Kentucky Library, he was pleased to find that the Bradford tradition still stood in high honor and that Kentucky librarians were neither enemies of books nor of the instruments by which books were made. The long and detailed letters recording typographical recollections of New York and elsewhere that, as Anderson wrote in his last painful illness, are basic source materials for the history of the craft

12 GRIFFITH COLLECTION

A few years later, another expatriate Kentuckian, the late Chauncey H Griffith, who had risen to executive responsibility in the Mergenthaler Company, found his way back to John Bradford's city. Mr Griffith was another typographical pack-rat in the best sense of the word He saved every scrap of his very extensive correspondence with personalities such as William A Dwiggins and Rudolph Ruzicka. He would never discard a tentative design of a new letter or a trial matrix that might fall into his hands. He hung on to photographs, announcements, and other ephemera diligently His representative collection of fine printing from both sides of the Atlantic has filled many gaps and pushed some collections such as Grabhorn and Merrymount far along towards the unattainable goal of completeness.

13 OTHER GIFTS

The Anderson and Griffith gifts had a snowball effect Time and again other gifts have come in with notes beginning, " I know that Griff would have liked to have ", or "Jim Anderson was always so thoughtful of me that " Obscure and unlikely acquisitions have come in by this route that would otherwise never have reached Lexington. When the records and stock of the late James Guthrie's Pear Tree Press in Bognor Regis came on the market, the material was purchased for the library by a friend Other similar gifts are in process

2 Typographical Collections

Any library that is building a strong typographical collection must have an intimate affiliation with as many of the great book collectors' organization as possible The discriminating members of these groups are likely to insist on the best available design and typography both for their ephemera and for their publications The record of the Grolier Club in this respect is exemplary The University of Kentucky Library has been fortunate enough for a number of years either to have been on the mailing lists or to have hadp atrons who are members of the Grolier, Rowfant (Cleveland), Caxton (Chicago), Roxburghe (San Francisco), and Coffin (Los Angeles) Clubs Subscriptions were entered in the late 1940s for publications of the Book Club of California (San Francisco) and for the Typobhiles (New York), and more recently for the work of many local groups such as the Book Club of Sacramento (California) and the Berliner Bibliophilenabend A strong effort has also been made to secure ephemera and major publications of significant foreign societies It has been possible for the library to be placed on the mailing list of local typographical clubs, in Munich, Stuttgart, and Hanover, and any library may subscribe to the publication of the Maximilian-Gesellschaft (through Hauwede-11, of course) and the Sallskapet Bohvannerna (both Stockholm and Helsingsfors groups) It is not quite so easy to find patrons who are members of the rather limited Cien Bibliofilos de Argentina, the Sociedad the Bibliofilos de Barcelona, or the Grafisk Cirkel (Cophenhagen), but Kentucky receives all their publications (including the marvellous array of Christmas greetings from individual Barcelonans) There are still others which have not yet been "cracked", but perseverance will ultimately win out

The Roxburghe Club publications are the *Schmersenskind* of most American university libraries ever since the Miscatonic University Memorial Library established the fetish of getting a complete set Kentucky had about seventy-five per cent when the fashion came into full flower Now it seems the part of wisdom to acquire only those that are essential and allow our colleagues to run the market price up for each other's benefit, there are too many other fields that the parvenu libraries haven't discovered yet, especially beyond the Rhine.

3 Printing Literature

In their lifetimes Mr Anderson and Mr Griffith emphasized constantly the desirability of being on the mailing lists of the great type foundries, major commercial printers, commercial binderies, and paper mills Specimens of type, ink, paper, and illustrating processes pour from these firms in abundance, and often their keepsakes are noteworthy both for content and typography (R R Donnelley's "Lakeside Classics" being a distinguished example). Kentucky is on the mailing list for all such firms in North America and Western Europe. In the last two or three years some of the major printing establishments on the other side of the Elbe, notably in Saxony and Bohemia, have absorbed enough creeping capitalism to resume such mailings.

31 SCANDINAVIAN TYPOGRAPHICAL LITERATURE

A special field for the collector of modern typography is the Scandinavian Christmas and New Years' books, a subject which the present writer has discussed elsewhere in some detail The outstanding advances in typography made in Sweden and Denmark in particular during the last decade and a half are reflected not only in full-size books, both commercially and privately published, but also in a flood of Christmas books that appear annually. These items are listed in the *Grafiskt Forum*, *Nordisk Boktryckarekonst*, and *Bokvannen* (Stockholm) Most are to be had for the asking, and Kentucky holds perhaps ninety per cent issued since 1945 in the four continental Scandinavian countries and a good selection issued in Denmark from 1900 to 1945 A related genre in the *Foretagsmonografi* (business history), of which the Stora Kopparberg publications are distinguished examples, and the corporation serials, of which the Wazata-Skrifter (Gothenburg) are particularly representative Not all the business histories and corporation serials are typographically distinguished, and one must get a "feeling" for them to identify those which are important as examples of printing Otherwise the collector may be overwhelmed with junk that properly belongs in libraries of colleges of business administration

4 Acquisition

It is the belief of the collectors of fine printing in Lexington that only practitioners of the craft can properly appreciate and collect judiciously. A little before the Anderson gift two Lexington ladies began their first tentative experiments with a private press. Mrs Amelia King Buckley, now librarian of the noted racing collection of Keeneland near Lexington, and Miss Carolyn Reading (now Mrs Victor Hammer), acquisitions librarian at the University of Kentucky, founded their Bur Press (so called from the initial letters of their last names) Their work progressed from their relatively crude "Kentucky Monographs" on Jefferson Davis and Constantine Rafinesque done in the late war years to

Clay Lancaster's *Back Streets and Pine Trees* (1956), a sophisticated hand-printed work that meets the highest standards of typographical excellence Aiding and abetting the Bur Press was the late Joseph C Graves, Lexington haberdasher-printer, whose own Gravesend Press was the source of several whimsical but tasteful nugae

41 Victor Hammer

When Victor Hammer brought his stamperia del Santucfio and great tradition of meticulous craftsmanship to Lexington in 1948, the incipient printing interests in the community received an enormous impetus The importance of Hammer's senilia and his effectiveness as a teacher in his later years cannot be overemphasized in the development of both American and German typography in the mid-twentieth century A particularly productive activity centering around Hammer was the Anvil Press, of which there is an historical account in the descriptive brochure about its books The Anvil Press was established to make fine hand-printed books available at a low price, and while the number of titles on its list is necessarily small, it has fulfilled its mission

5 **Presses**

Of course printing equipment drifted to the University of Kentucky Library's basement Two presses, the High Noon Press (a lunch-hour operation) and the Margaret I King Library Press, have operated there under the general tutelage of Mr and Mrs Hammer The latter has produced two imprints *Prometheus*, written by Thomas Merton, the noted Trappist of Nelson County, Kentucky, and printed by Mrs Hammer, Stokely Gribble and Nancy Chambers, and a remarkable edition of the Gettysburg Address from a variant text, printed by Gerald Stevenson, on the replica of the Raimundi Press in the Laurentian constructed by Victor Hammer Both items have had a very substantial exchange value for the library Incidentally, the six Lexington presses mentioned thus far (Bur, Gravesend, Stamperia Anvil, High Noon, and Margaret I King) unquestionably give this community the largest number of Private presses, per capita, in the world

51 Hammer Collection

The acquisition of the Raimundi Press is a special story and provides a special lesson in how to give books to American libraries When Victor Hammer's friends wanted to provide him leisure to continue his creative work, they discovered to their dismay that certain predatory American internal revenue agencies do not classify gifts to artists in the same category to which they assign gifts to institutions Accordingly, Mr Hammer's patrons presented the University Library with a substantial gift running into five figures for the purchase of the artist's work, thus assuring him a market and giving the library high-level exchange material of inestimable value Some of Mr Hammer's work such as the Press and a certain original designs, are, of course, part of a permanent (and ultimately to be comprehensive) Hammer Collection. The books have brought to the exchange desk everything from early European printed books to modern Chinese illustrated books

52 TIBETAN BLOCK BOOKS

Speculative and imaginative, but judicious is essential to the development of any collection Exotic materials for a books museum (a natural adjunct to collections of typography) are often out of the question except in facsimile. A few scraps of antique papyri can still be had, and fragments of Kufic parchment mss may be found in the Great Oriental Bazaar But Central Asiatic xylographic books (Tibetan and Mongolian) are not easy to come by anywhere in the free world, even in Calcutta and Kathmandu, as our representatives discovered When a notice was spotted in a Russian library's annual report that its Asiatic section had acquired certain Tibetan block books on exchange from the National Library of the Mongolian People's Republic, an airletter was dispatched to Uloan Baator proposing an exchange. Less than two weeks later an enthusiastic reply came in Mongoloid Russian, and a lively exchange has flourished for some three years, bringing over sixty Tibetan block books, some with exquisite wood engravings in the Lamaistic tradition

53 SOUTH POLE IMPRINTS

Exotic materials should not be the primary objective of a typographical collection, but the collector who fails to pick up what he can is derelict Thus a Kentucky scientist with an International Geophysical Year Group in Antarctica was requested to save whatever printed materials he could get A handful of mimeographed menus from a station at the geographical South Pole probably constitute one of the few existing collections of South Pole imprints.

6 Distinction to the Library

By the beginning of the last decade the Kentucky typographical collection had attained some recognition in the interior valley The Southern Books Competition, a regional variant of the American Institute of Graphic Arts selections of ten best American books of the year (from the standpoint of typography and design only), elected the University of Kentucky Library as its depository in 1952. Again, when a comparable Midwestern Books competition was started in 1956, Kentucky was chosen as the custodian of the winning books Ultimately these selections and the printed handlists will be a basic source for the history of regional typographical history in America.

7 Centre for Typographical Literature

One more word about services A strong collection will not only exhibit its own holdings but also will attract comparable materials from other quarters Thus Kentucky has brought to the Western hemisphere major exhibits of contemporary Danish, Norwegian and German typography, modern English, German, and Danish bookbinding, and, more recently, in the fall of 1959, a full blown American debut for treasures of the Klingspor Museum in Offenbach Main

John Bradford, who knew nearly naught of composition and started work with a type font in pi, founded a tradition whose flowering has gone far beyond his most earnest hopes. Lexington, Kentucky, has a strong position among the worlds' centers of typographical theory, experimentation and practice Much of the credit for this development belongs to the tradition which sank its first strong roots in the summer of 1787

CHAPTER Q4

Early History of European Periodicals

HANS WIDMANN

0 First Scientific Periodical

01 JOURNAL DES SCAVANS

ON 5 January, 1665 appeared *Journal des scavans*, the first scientific periodical of Europe. Created a Sieur de Hedouville, its publisher Denys de Sallo put his name on the title-page. At the end of the third month the young publication ceased with the 13th number, because the publisher was not prepared to submit to the censor regulations imposed on him. Abbe Jean Gallois-appeared on the title-page as G. P. (Gallois Presbyter), and in 1666 the periodical found in him a successful "continuer". Prutz in his *Geschichte des deutschen Journalismus* says (1845) that the original edition of the *Journal des scavans* is "perhaps one of the greatest rarities."[1] With justified pride Denis-Fancois Camusat wrote in his *Histoire critique des journaux*[2] (which appeared in 1734): "Periodicals were born in France ... it is one of the luckiest inventions of the century of Louis the Great ..." Foachim Kirchner,[3] who quotes these words, stresses the fact that the language of the new periodical was French and not, as usual, Latin and that this was "an innovation which was against the learned practice of that time." When Kirchner further states that Volumes 1 to 5 of the *Philosophical transactions*, which on the model of *Journal des scavans* was published in 1665 in England by Henry Oldenburg, Secretary of the Royal Society, were translated into Latin and that this translation appeared in Frankfurt in 1675, it can be pointed out that immediately after its appearance the *Journal des scavans* was translated into Latin by a German and published in Leipzig by Thomas Schurers Erben & Mathias Gotz:[4] "Le Journal des Scavans, hoc est: Ephemerides eruditorum Anni M DC LxV. Accurante Hedouvillio Gallice primum editae. Jam vero in Linguam Latinam versae opera atque studid M F Nitzschi. Dr T I Lipsiae ... MDC LXVII'. The translator was Professor Friedrich Nitzsche[5] of Giessen.

1 Polyhistor

Somewhere in the second edition of the *Polyhistor* of Daniel Georg Morhof[6] published in 1695, it reads simply " Pars aliqua istarum Ephemeridum in linguam Latinam conversa est a Nitschio" On the contrary, there is a piece of information on four years of publication of the translation in the Zeitschriften-verzeichnis which was brought up-to-date by Johann Joachim Schwab and this is prior to the four editions of Morhofs *Polyhistor* prepared by Hohann Albert Fabricius [7] There it reads. "Ephemerides Eruditorum Parisienses, e Gallico versae a Friderico Nitschio Lips 1671, 8, Anni 1665, 1666, 1667, 1668". Insofar as at least the number of years[8] of publication is concerned, this information tallies with the communication by Nicolans Hieronymus Gundling in his *Collegium historico—literarium . uber die vornehmsten Wissenschaften* Under 'Periodical publications' of the Catalogue of the British Museum, I do not find the Latin translation recorded According to the *Union List*, the UB Chicago possesses publications of three years (1665-67), in the UB Tulringen the publications of 1665 and 1666 are found, both bearing the year of publication 1667

2 Translations

It is remarkable that in the fourth edition of Morhof's *Polyhistor*, 1671 has been given as the year of publication for these Leipzig transactions in contradiction to the title page of the edition cited Kapp Goldfriedrich[9] also has accepted the year 1671 That the Leipzig translation must have appeared before 1671 can be seen from *Journal des scavans* (Monday, 15 October 1668) wherein mention is made of this translation [10] A German scholar has produced this translation of the issues of *Journal des scavans* of the years 1665 and 1666 and has it published in Leipzig "to satisfy the curiosity of those who do not understand French" The author of the review further calls this Latin translation "elegant" and (with some limitations) "fairly faithful " He regretted only the fact that the explanatory drawings were reproduced in a reduced form The praise given to *Ephemerides eruditorum* is also repeated by Nicolaus Hieronymus Gundling, but he does not notice the contradiction when he notes that the translation, that appeared in 1671, is praised in the Journal[11] of 1668 Already in Number 13 of the *Journal des scavans* of Monday 30 March 1665, from which de Sallo divorced himself owing to censor difficulty, there is a mention of the new publication of the *Philosophical transactions* in German. From this it can be understood that a plan of a translation into Latin was made soon after the appearance of the French original and was known to the Editors of the *Journal*. It is natural to presume that the German scholar turned to the publisher of the original, when he had in view the translation into Latin Now in the preface to Vol XIV of *Journal des scavans* is noted, "the Journal of Scavans is translated into Latin in several places, it is translated into English in London; it is read in Martiniques, it is carried to the East Indies, it is reprinted in Holland " According to this, the *Journal des scavans* is translated into Latin at several places (I could not find information in detail).

3 Latin Language

To the present-day observer it may appear remarkable that Latin was chosen as the vehicle of a translation[12] that appeared in 1667 in Germany, of a journal that had been appearing in Paris since 1665. We immediately think of the *Acta eruditorum*, which began to appear in 1682 in Leipzig (Grosse and Gleditsch) and was edited by Otto Mencke, the Leipzig professor. The editor Mencke himself has communicated the reasons they were guided by. German was less known abroad than Latin which was the international language of scholars and was followed by French. Since the 17th century French was the language of courts and scholars.[13] Gottfried Wilhelm Leibnjtz regretted in verse, "Many courts are ashamed of the German language, invite Frenchmen to dinner and seek their advice."[14] He came out with a "call to the Germans to use their reason and their language better". But quite often in his publications, official reports, and letters he himself resorted to French or Latin. Even a few centuries later, German was foreign to, and almost unknown in, the Berliner Akademie der Wissenshaft.[15] Such a state of affairs continued even after Christian Thomasius had begun to lecture in Halle in German and started in 1688 a German periodical, (*Scherzhaft-und ernsthafte, vernunftige and einfaltig Gedanken uber allerhand lustige and nitzlich*—Bucher und Frage.)[16]

4 German Language

A specially eloquent symptom of this state of affairs is the fact that for the translation done by a German scholar of a French periodical, German was not considered to be the suitable language. Mentioned earlier, the Latin translation, which appeared in 1675 in Frankfurt/Mein for the first 5 volumes of the *Philosophical transactions*, runs parallel to the fact that the issues for 1685 of the *Acta eruditorum* were rendered into French.

5 Latin Translation

Gottfired Wilhelm Leibnitz repeatedly refers to the Latin translation of *Journal des scavans*. Leibnitz took up the idea of publishing catalogues for the Frankfurt book fair taking place since 1564 and also for the Leipzig fair, one for each fair. These catalogues were to contain information on outstanding new publications. On 22 October 1668 he sent to Kaiser Leopold I (1668-1708) a request for the grant of a privilege for the Nucleus Library[17] planned by him. As the permission was not granted, he on 18 November 1669 repeated his request, fairing no better. In the enclosure to his first application (22 October 1668) he mentioned *Journal des scavans* as an already existing enterprise.[18]

6 Book Fair

1 As in each fair more and more books appear and as this is likely to attain an unforeseen scale, it is desirable somebody take up the task of presenting in a brief summary the contents and the essence of the books appearing at each fair

2 The usual catalogues for the new publication, appearing on the occasion of the fairs at Frankfurt and Leipzig, contain only the names of the authors and titles of the books

3 But the purpose of a book is quite often insufficiently expressed in the bare title, since most of the titles are either too laconic or too grandiloquent

4 So, in addition to giving merely the titles of the books, a summary of their contents is desirable, an idea which was suggested to me by the work of Photius, a former Patriarch of Constantinople. He has left behind extracts and contents of several books, that were available in the Temple of Sophia in Constantinople but mere completely destroyed during the Turkish conquest[19]

5 In our times, a similar task has been taken up partly by the French *Journal des scavans* whose collaborators briefly report on the contents and purpose of a certain number of outstanding new publications, adding their opinion about them.

6 Yet I need not mention the French, who cover only a few books and whose publications reach us after some delay I need not speak on that matter Why should we be dependent on them and why should we await their publications, when we ourselves have the possibility of offering something greater, thanks to Frankfurt fair to which most of the European books stream ?

7 So I have hit upon the plan to try whether His Holy Imperial Majesty will grant me an unlimited privilege for such a half-yearly publication of a *Kerns der Neuerschlinungen* (core of new publications)

8 The intention is to give in brief following information regarding the individual outstanding books as far as obtainable from the books themselves — life of the author, summary of contents, and, finally, individual noteworthy points of view given in the book For each fair this publication will be hardly more than an "alphabet"[20] in size

9 Such an enterprise will be useful in innumerable ways I will briefly mention only a few It will, of course, be useful for the book-dealer in selling, and for the reader in acquiring, a work. The former will accept only good books to sell, and the other at any rate no bad to buy

10 The book dealers can take this *Kern der Neuerscheinungen* home from each fair at Frankfurt (if their residence is elsewhere) and send it to their friends, acquaintances, and correspondents[21] This procedure helps every one know clearly and safely which book is suited to him On the contrary, at present the purchasers (especially if they stay far from big cities) have to rely solely on the titles given in the catalogues and have to procure books, pinning their faith entirely on to the mere titles. If they find that a book does not concern

them, they have to retain it uselessly and against their will, or to send it back and suffer expenditure, wrath, and loss (for themselves and for the dealer) Out of mere apprehension many will not consider even good books, just because they cannot be sure of the quality till they incur the cost of, and undergo the painful process of reading they are subjected to.

11 But even if a book is indisputably good and the buyer retains it, it is not everybody's business to read it thoroughly and carefully. Many will not, therefore, rue it,—either because they are easy-going or because they are too busy, provided there is someone, who by his efforts would provide him with the benefits of time-consuming reading

12 The plan will be considered highly desirable by those who, whether they lack the will or possibility of buying or reading a book, require it for discussion, historical observation, and practical purpose or out of mere intellectual curiosity and would like to have a sort of summary information about a book This is pleasant as well as useful, especially now-a-days when education rests so much on a knowledge of literature

13 Even for those, who actually do read a book, the summary will have the value of an aid to memory or an extract. In the former case the result will be that they can more easily retain in memory the main thoughts of the work, and in the latter they can grasp ideas with less labour, and the most important points can be had at a glance, relegating everything else

14 Gradually, therefore, the summaries can be extended to more important books published long ago and, if they are consolidated, they would make up a complete history of literary publications in chronological sequence, whereupon a complete catalogue of subjects and materials is prepared in an alphabetical sequence Thus we can ultimately possess something like an inventory of human knowledge, written down in the books, in a manner desired by Francis Bacon, the Chancellor of England I do not make particular mention of the fact that from this *Kern der Neuerscheinungen* books, that actually appear in the market, can be had, while the traditional catalogues record many books as actually published, even when they are not actually published or are never likely to be so at all "

(In the paras following Leibnitz draws attention to the importance which, in his opinion, such an organ must have for the State, viz from the point of view of the censor He then discusses organisational problems related to his plan, the acquisition of the copies of the books to be reviewed and the time of publication of the half-yearly publication, which must equally suit the two fairs at Frankfurt and Leipzig)

7 **Views of Leibnitz**

It is clear that the view points expressed by Leibnitz partly parallel those expressed by the editor of *Journal des scavans* in the Foreword to the first year's volume (1665), viz., that it is not enough to give mere titles of the new publications as bibliographers have done so far, but that the contents must be made known; this will be useful for all,—for those who can afford to buy books (because they have already an idea of what they acquire) and for those who due to lack of funds cannot purchase books for their private libraries In this latter case they get at least a knowledge of the contents of new books through the periodical.

On the other hand, Leibnitz developed his plan in his own way His ideas sway over the individual half-yearly publications to the summary, from the ephemeral to the permanent. The advantage he sought to gain by making his *Nucleus librarians* simultaneously a corrective to the erroneous fair catalogue, had to be limited to the titles, which found a place in the selected list For other titles this argument is invalid, albeit weighty The sorry state of affairs was pointed out even in the fair catalogue of 1795 It said, "Books not yet ready are shown ready. Conversely, those published are not shown or the titles in the lists are often quite different from the actual titles upon the books".[22]

Leibnitz made great efforts to obtain the privilege for the publication of the periodical planned by him At that time he was a librarian to the Mainz Diplomat, Baron Johann Christian von Boineburg, a highly educated man of extensive learning. To the young Leibnitz in his efforts for the project the personal relations of the Baron were an asset Anyway, Boineburg did not fail to supply recommendatory letters to the Imperial Court in Vienna In one of the letters, which Leibnitz himself sent to, Christoph Gudenus, the Kur Mainz Resident in Kaiser Stadt, and one of the personages working there, he mentioned the Latin translation of *Journal des scavans* by way of arguing that as a privilege had been granted for the Latin translation of a French periodical appearing in Leipzig, he could hope to obtain permission for his project too [23]

8 Scientific Periodical

The privilege applied for was not granted We can feel the resulting disappointment for the young scholar Yet it was something more than a refusal to comply with a personal desire If the plan drawn up by Leibnitz in 1668-69 had been realised, it might have become the first scientific periodical of Germany [24] (Incidentally, this honour goes to the *Miscellanea curiosa medico-physica* of Academia Naturae Curiosorum founded in 1951 by a Schweinfurt medical man—later the Leopoldinisch—Karolinische Deutsche Akademie der Naturforscher at Halle From 1670 the *Miscellanea* began to appear as a yearly publication).[25]

Leibnitz was not the only person to have such plans Daniel Georg Morhof, the already oft-quoted author of *Polyhistor*, says in the introduction to sciences in Volume I of this encyclopeadia, "It is already nearly twenty years since many personages have developed the plan of a scientific periodical The first edition[26] of his work appeared in 1688 Thus we come to the end of the sixties of the 17th century—to the year in the same period during which Leibnitz submitted his plan to the Emperor. The idea of a scientific periodical, says Kirchner, was 'in the air' at that time [27] Since the time Morhof spoke of his plan *Polyhistor*, a work that found many readers and ran into several (even posthumous) editions, his project went down in the history of science [28] But Leibnitz's plan went into oblivion Despite failure Leibnitz, however, became an eager collaborator of *Acta eruditorum*', which was started in 1682. In 1700 when the Berliner Akademie was founded, Leibniz saw his long-considered plan take shape The man, so versatile and so rich in ideas, has also enriched the book and library profession and it was he who for the activity of book collection uttered the imperishable expression in the statement that "of all times and all nationas", a library is "like an assembly of the greatest men who tell us their sublimest thoughts "[29]

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18 GOTTFRIED WILHELM LEIBNIZ *Collection of writings and letters* edited by Preuss Academy of Sciences R1. General, political and historical letters (The language of the application is German, the enclosure is in Latin I give it here in translation)
19 The Patriarch Photeus of Constantinople, born 820, wrote (among others) a work, which since the first edition by David Hoeschel (Augsburg 1601) bore the title 'Library' (B2) It contains a large collection excerpts and notices from 279 Christian, theological as well as lay works and Leibnitz rightly states that the diligence of collection of the Patriarch has left to posterity a knowledge of a fairly large number of Greek and Byzantine works which otherwise would have been lost Cf —Konrat Ziwgler in Pauly—Wissowa *Real encyclopadie der class.* Altertums—wissenschaft 20 Stuttgart—Druckenmuller 1950, columns 667-737

Moreover, through a remarkable misunderstanding of the character of his excerpt work Photios, and not Von Leibnitz, was thenceforth taken as the father of journalism To Constantin Wolf (who worked as a teacher of Greek in Wittemberg and Danzig is devoted a programme· "De Photio ephemeridum eruditorum inventore " The only thing, that makes the method of extracting used by Photios appear comparable with newspapers and periodicals, could be the fact that "even our early learned newspapers were almost exclusively busy with extracts and fragments" (Brutz *History of German journalism*, p 35, along with footnote)

20 23 printed sheets.

21 The book dealers were in the habit of informing their customers of new publications by writing It today appears obvious, but we must bear in mind that at that time bibliographies, abstracting periodicals, etc were absent

22 General list of books which in the Frankfut and Leipzig Michaelmas fair of the year 1795 were newly printed or reprinted in an improved form, or were to appear in future, Leipzig Weidmann (1795) p 111

23 Letter of 11th January 1669 from Mainz (Leibnitz collected writings Ibid 18)

24 *Cf* Paul Ritter (in the introduction to vol I of the Academie edition) *Leibnitz Collected writings Ibid* XXXVIII

25 JOACHIM KIRCHNER German Journalism, its history and its problems Vol I, Ed 2 Wiesbaden, Harrassowitz, 1958, p 16f Hellmut Rosenfeld, *On the oldest journals* Bulletin of library science, 58, 1941, 133-135

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CHAPTER Q5

Books for Children and Youth in the German Democratic Republic

HORST KUNZE

1 Source Materials for Research

As independent species of books,—books for children and youth—was evolved in Germany relatively late. This happened only in the eighteenth century, Even through the whole of the nineteenth century, this new species remained only as a minor part of the national book-production. Only those outside the professional group of writers concerned themselves with its improvement and evoluation. How little the literary and social significance of books for children and youth was recognised in the past two hundred years is evident from the fact that libraries excluded books for children and youth from their collections. Thus, today no library in the whole of Germany has an appreciable stock of books for children and youth. The stock of the libraries can not therefore lend itself as a source for the study of the development of writers of books for children and youth. The preservation of stray collections of books for children and youth, we owe mostly to the initiative of private collectors and of certain specialised educational libraries. Even here, the second fascist world war (1939-45) did great damage and even destroyed most, if not all, such special collections. However, since 1913, the German Library at Leipzig has been building a collection of the books for children and youth in the German language. This collection is available for use by research-workers in this subject.

2 The Period of Struggle

The emergence of books for children and youth as a species of books did not handicap the ruling class in Germany. The Bourgeoise, in alliance with the influential circles of the church, used it as a means of achieving their own political aims. Thus, the books for children and youth were fully used in the nineteenth century to realise the educational ideals of the Bourgeoise through the production of dogmatic sanctimonious religious books unsuited to children. In 1870 the nationalists needed chauvinstic books for youth to promote the kind of the development determined by this ruling class. In the nineties of the last century, progressive educationists exerted themselves to stop this misuse of books for children and youth Especially it was Heinrich Wolgast who, basing himself on Karl Marx, demanded a variegated training for all children and with his pamphlet *Das Elend unserer Jugendliteratur* (The low standard of our youth literature) published by himself in 1896, made a devastating criticism of the books for children and youth of the nineteenth century Well-meaning men like Wolgast had doubtless done some good through their great emphasis on the legacy of classic German literature and folklore. But even then, they were not able to stop effectively the literary, moral, artistic, and aesthetic deterioration of books for children and youth during the age of German imperialism The period after the First World War—the twenties of our century—was as confusing for the books for children and youth as for other activities, till the German fasicism which came to power in 1933, nullified all humanistic efforts

3 Status as a Distinctive Class of Books

Thus one can say with full justification that after 1945, in the first Workers' and Farmers' State in Germany—that is, the German Democratic Republic—a new era dawned for the books for children and youth Only in the German Democratic Republic have such books been recognised as an essential and appropriate component of national book production, freed from the impediments put by profitmaking enterpreneurs exploiting hack-writers Books for children and youth can now develop as a balanced, educative, and distinctive class of books which enjoys the positive support of the State The best writers and artists have been working together in its creation during the last 17 years, having in mind the words of Maxim Gorki that for children the best is just good enough

4 Promotion by State

Thus one of the first legislative measures, of the German Democratic Republic (GDR) founded in 1949, was a "Law about the participation of youth in the building up of the GDR and the encouragement of youth in the schools and professions, in sport and recreation" This law was enacted on 8 February 1950. In the cause of books for children and youth, the law provided, among others, the establishment of children's libraries expecially school libraries, the establishment of a new publishing house for books for children, and the institution of an annual prize-competition in respect of the creation of new books for children and youth. The recognition of books for children and youth as an essential part of the books of the nation is shown by the fact that the Deutsche Schriftstellerverband (Union of German writers)—the professional organization of writers in the German Democratic Republic—deals also with the problems of books for children in the course of its work, especially in its congresses as well as through its monthly periodical *Neue Deutsche Literatur* (*New German literature*) and by its attempts to encourage and honour the creation of children's books Many writers are honoured for their creative work and especially for their books for children with the highest state award of the Republic,—the National Prize for scientific or cultural achievement—for example, Ludwig Renn for his book for youth entitled *Trini*, Erwin Wtrittmatter for his book *Tinko.* The medium of literary competition has also been employed for encouragement of books for children and youth. The Ministry of Culture conducts annual prize-competition for books for children and youth, in which young talents as well as established writers of children's book take part.

41 AWARDS AND EXHIBITIONS

In 1951 an Annual Award of Honour was established for the fifty best books of the year, which includes the special group of books for children and youth The high standard of book production achieved by books for children and youth is reflected by the fact that among the fifty best books of some years many books for children and youth appear The number of exhibitions which are exclusively for books for children and youth and those conducted by the Book Trade, by libraries, or by other organisations or associations is a legion The first big representative of Book Exhibition after 1945 was conducted in Leipzig (Deutsche Buchkunstausstellung) (The German Book Trade Exhibition) in 1952 This contained a special group devoted to children's books In common with all socialistic plans, books for children and youth, had a whole section devoted to them in the important International Book Trade Exhibition held in Leipzig in 1959 in collaboration with an International Committee A special reading room was a point of attraction for the youth of the city of Leipzig, during the whole period of this exhibition.

42 INTERNATIONAL COLLECTION

Among the institutions which devote great attention to International books for children and youth and which have developed exhibition activities in the subject, the Deutsche Buchkunstausstellug (The German National Library) is to be given the first place. It is the only German Scientific Library with a Department of Books for Children and Youth. It was established in 1956 as a special department among already existing departments such as, for manuscripts, incunabula, maps, music and oriental manuscripts The new Department of Books for Children and Youth is playing a valuable part in the general purpose of this central scientific library of the GDR This Department of the German State Library has built up a model collection of international children's books and has as its noblest function the furthering of friendship among peoples through books for children and youth collected through international co-operation. This special Department is first and foremost intended for those who either create children's books—such as writers, illustrators, publishers, and printers—or those who work with children's books—such as librarians, lecturers, and educationists This Department is not merely a children's library in the usual sense As a special Scientific Department, it has other activities also, such as collection of data about the international output of documents on the theory of books for children and youth Different catalogues have explored the volumes, already over 20,000 in number, of old and new books for children collected in this Department

5 Standard of the Books

For the extensive and intensive distribution of good books much depends in the final analysis on what the government does for the distribution of good books for children and youth Apart from the fact that, as we have already mentioned, the best writers of the GDR have created children's books, the number of children's books which appear every year is considerable Among them some are modern books written within the country ,some are translations of books for children and youth in different languages, and some are new editions of classical German and foreign books for children Thus, for example in 1961 there appeared, in the GDR, 463 books for children and youth in a total publication list of 13,036 not including the currently appearing contributions in children's magazines The books for children and youth published since 1949 are, as is quite natural, of different artistic literary levels. But we are proud to be able to state that among these not even a single product of trash and filth is to be found as it is usual in most of the capitalistic countries even today Even in their typographical and illustrative features, the books for children and youth in the GDR distinguish themselves by a high standard

6 Statistics of Use

The book trade and the public libraries, previously known as peoples' libraries, help in the wide distribution of the books for children and youth Even here, a few figures will make it clear what a happy development the reading habit of children and youth has taken

Year	Readers of the public libraries		Children libraries		
	Total	Those under 14 years	Total	Independent	Children's section in officially run libraries
1956	1 843 542	577 366	529	211	318
1957	1 888 752	583 474	666	351	315
1958	1 997 138	605 949	700	401	299
1959	2 156 637	655 456	771	408	363
1960	2 284 799	744 986	819	448	371

7 Research

There is a Central Institute for Library Research in Berlin It has been established under the orders of the Ministry of Culture. It is a Centre for the systematic study of all problems and general methods in library research. In 1960, this Institute conducted a scientific conference for many days on the problems connected with books for children and youth in the public libraries.

In order to create a basis for common work for close collaboration for all people who are interested in books for children and youth in the GDR, a study group for books for children and youth in the GDR was created in 1959 Its chief work is the introduction and encouragement of all measures which are suited to the improvement of work relating to books for children and youth. It works in close collaboration with the Ministry for Culture, the Ministry for People's Education, the Pioneer Organization "Ernst Thalmann" (for children under 14), the Free German Youth (The Youth Organization for Youth above 14 years), and with the publishers of children's books The study group concerns itself among other things with ideas for liberal education and training, ideas about friendship among peoples and peaceful co-existence among peoples All this is done in agreement with the International Board on Books for Young People It advertises the products of every responsible and clean book-producer of books for children and youth Different study circles which have formed themselves within this study group concern themselves with special aspects, such as the history of children's books and collaboration with the press A research organ on problems of books for children published by the study group will appear as a periodical this year There are over 75,000 vouth members in the *Buchgemeinschaft der Freien Deutschen* (Book Circle of the Free German Youth) established in 1960 They receive every month a well got-up book costing DM 3 80 or DM 4 80 as well as the latest issue of the quarterly *Fur Dich* (*For you*) free of cost

This no way completes the report about the care and encouragement of books for children and youth in the GDR Their distribution demonstrates that the struggle against the moral and mental degradation of youth can be effectively carried out with good books for children and youth Because of this humanistic ground, books for children in the German Democratic Republic receive very great attention Because of the same reasons, all the librarians of the GDR admire Dr S R Ranganathan on account of his dedication to the library profession His devotion is an illustrious example to us all as it is deeprooted in the love of people—particularly love of the children—who will determine the fate of the world to-morrow and whose training and education are of vital interest to us all !

PART R

SOCIAL EDUCATION

CHAPTER R1

Dr Ranganathan's Contribution to Social Education

S S SEKHON

0 Introduction

ALMOST everybody in India is quite aware of the importance of Social Education today. Its scope is very vast and this requires much effort on our part to understand its various facets as we are engaged in the gigantic task of making a good citizen of every adult person.

01 GANDHIJI ON SOCIAL EDUCATION

Once Mahatma Gandhi remarked "Adult education of my conception must make men and women better citizens all around. It should include the Education of every stage of life". Formerly it was thought that by imparting the knowledge of the three R's the aim could be achieved successfully but now the word-adult Education has totally been discarded and has been replaced by the concept of 'Social Education' which in its turn covers a wider sphere of activities and enunciates a new phase of conception. Pt. Nehru once said "Social Education a wider sense, is perhaps more necessary than any other kind of Education but this may be so if the terms are not interpreted in a narrow way"

02 FUNCTIONS

P V Bhuma Reddy has aptly brought out the three fold functions of Social Education in an article which appeared in the Educational India, February 1960 issue wherein he defines the concept as under:

1 Education for self improvement and specific objectives
2 Education for community responsibility and development, and
3 Education for the international understanding

03 ANALYSIS

Judged from the aforesaid criteria of Social Education, Dr Ranganathan has given it so richly deserved consideration in order to carry out the aim sought for, that every phase of Social Education is strongly represented in his works giving his writings a distinct feature, uncontaminated with outside influences of his contemporaries

1 Contribution of Ranganathan

Some of the great men are associated in our mind as the embodiments of typical qualities as some are famous by their inherent grandeus of character, few by their Spirit of humanity while others by their wisdom. Dr Ranganathan evokes the last image He is the international figure in the Library World This small article giving his contribution in the field of Social Education cannot fully cover this vast subject for which he has proved a God-sent personality born for carrying out the aims of Social Education Really his contributions is marvellous His writings bring before us a warm emotional temperament, an unassuming demeanour and transparent sincereity towards the cause of Social Education and Library Science Years have brought him unique recognition and fame, so far as Social Education development is concerned He has been working incessantly for carrying out this particular purpose and the serenity of mind and inner equilibrium he has achieved after life's strenuous toil, has imperceptibly passed into his creative library work His book 'Social education literature' published by Indian Adult Education Association, has lavished high encomia on the wonderful execution of his pen It was published in 1953, and its reprint has appeared again His single-minded devotion to the aim of Social Education, resulted in cultivating intimate friendships with other eminent personalities in the field His spell of genbies in the library world is so wide a spread that it occasions very little surprise when we find him holding very high posts of responsibilities in the Indian Adult Education Association He published a work under the caption of 'Rural adult education' which was prepared on the occasion of the UNESCO Seminar, Mysore November-December, 1949 and that was published by the Indian Adult Education Association The same year he was elected the President of the Indian Library Association with unanimous verdict and under his brilliant leadership this organisation did wonderful work in setting up and popularising library matters, with almost a ganatic zeal It is his mission to make this country library minded and is inculcate therein the idea of Social Education like other European countries are doing today So he has been working with ceaseless endeavour towards this end He has really brought out the practical aspect of this new concept and has made a sensational debut in the library World by putting forth the new concept of Social Education No doubt he had to toil hard in order to enter into the citadel of recognition He took initiative in this end, at a very early stage while he was in the Madras University Library.

11 Agency for Self-Education

He calls the library as a means of universal perpetual self-education He says in the *Organisation of libraries*, the library is a means of self-Education, 'self' emphasizes a difference between the library and the formal school in which education is acquired largely through a teacher. He calls the library a 'social organisation' Bernard I Palmer says, "He has a powerful analytical mind, and approaches every problem with an unbiased critical attitude . I would go so far as placing him among the immortals of our profession" Dr Ranganathan's works have really revolutionised world thought on the aspects of library science thereby bringing out the development of the concept of social Education. He has lifted the discipline of librarianship for the first time to the level of a science He has been a teacher of library science for over thirty years and has published more than fifty books on the subjects.

2 Suggestions

In Education for leisure Dr Ranganathan deals with various aspects of adult education in India His highly constructive suggestions regarding education and other allied subjects have given the book a great popularity as it is a highly thought provoking work It is still in the press and its review has been published by the Asia Publishing House It shows the high spirit and unflinching efforts of the author in this direction His energies have not been exhausted even at this advanced age as he has taken it as the only aim of his life to work towards enrichment of educational literature

21 DIVERSIFICATION

Dr Ranganathan emphasizes the need of setting up a permanent organisation and the diversification of the educational machinery of our country and the establishment of an independent department of Adult Education and Library Science Once an eminent educationist wrote, "That education is the most worth which comes in response to a felt need". This saying has a bearing upon the all-round enthusiasm for Social Education in our free India No doubt, the foundations of a healthy democracy are largely based upon an educated wide awake electorate Naturally every Indian is anxious to see her flourish into a first rate democracy Dr Ranganathan has mentioned about the slogans of Social Education He calls Social Education in India as a challange to statesmanship According to him, it is sought to be solved by slogans and its aim in modern India is totally opposite to that of the Universal Education as advocated in the advanced countries of Europe and America The unprecedented momentum of Adult Education as gained by other countries has not so far been gathered by us and it is the snails pace that we are following in India He says that the challange of Social Education in India stems froms three factors namely—quantity, urgency and book famine. So far as quantity is concerned, he says, "the Social Education of this large number of people suffers between the old order rapidly dying out and the new order yet to be established".

22 URGENCY

Then he touches upon the urgency of Social Education and says that our present revival has synchronised with the upset of the balance between population pressure and nature near free gift Moreover it has also synchronised with the expansion of political units to colossal dimensions Again it has also synchronised with the setting in of rivalry between democracy tending towards socialisation and democracy tending towards dictatorship So the tension between these two world forces has been causing confusion in the minds of the people. Therefore arises the necessity of Social Education Dr Ranganathan has further stressed upon the need for the provision of the Economic, Political and Cultural Agencies.

3 Challange to Social Education

Dr Ranganathan ascribes the book famine to three factors namely-Paralysis of language, Latency of a authorship; and Technological inadequacy This is the tripple challenge of Social Education. Such slogans and announcements according to him, reviewed us of the paper money printed in plenty without the gold reserves to support it According to him, fond hopes are painted as facts and let afloat. No doubt truth will be out sooner or later But they bank on its being later than sooner. Nevertheless the challenge is tightening its grip

4 Conalising Social Education

He calls such slogans as comparable to catching at straw. The latest straw is found in factories Pass a law that every factory should make its employees literate in one year', and similarly in the case of village and family Dr Ranganathan calls those techniques as self and mass deceptive methods Such ex-cathedra methods and suggestions cannot solve the problem One way out, is immediate transitory rise and other is permanent rise but both require require extra quantity of team work The first way out is based upon reading out books, making the people literate and canalisation of Social impulses Great psychological qualities are required as sympathy, patience, resourcefulness, awareness, missionary zeal and a high level personality, in the task of reading out books for the second cases of literacy work, he says that training centres for Social Education should also be research centres and the media of communication may be periodicals, books and regular short term Seminar. So far as the conalisation of Social Education impulses is concerned, people speak glibly of utilising local human social resources. In the training of leaders they depend only on native flair. Dr Ranganathan calls in a branch of public relations which demands the rise of objective techniques.

5 Permanent Way

Further Dr Ranganathan suggests a permanent way He says that it must be largely one of self education through books, re-inforced at intervals by day to day direct contact with great personalities He suggests acts for universal child education, universal folk education and universal public library service The local bodies should be empowered and compelled to provide for these with adequate finances The transitory phase can be merged into the permanent one within a span of thirty years careful planning and forsightedness would be required in carrying out this perspective

6 Contributions to Library Science

The quest for truth that is the offshoot of the love for knowledge holds the clue to the successful carreer of Dr Ranganathan His contribution to Library Science is considered as Epoch making and revolutionary. His magnum opus the *Colon classification* was published in 1933

7 Main Aim

Primarily he was an educationist and his devotion towards that is no less strong. While an Educationist, his interest in Library Administration was aroused Adult or Social Education was his main aim and with development of the Social Education movement in India, he has done much He was the general secretary of India Adult Education Association for a greater period and was connected with the movement for over a decade Later he became its Vice President and was elected as its first President of the post-independence conference of the Association, held in Mysore Many words on Social Education mark out his personality as a clear thinker and an untiring writer

8 A Genius

We the Indians feel really proud of such a great genius An American authority on Libraries has said "Ranganathan's philosophy represents the mature thought of one of the great figures of the present age of international Librarianship Librarians may feel uncomfortable in the company of his particular kind of genius But one must admit that here indeed is genius and we who so pride ourselves on our professional objectivity and freedom from emotionalism, can profit greatly from his Philosophical insight".

Giving a finishing touch we can say that Dr Ranganathan's contribution towards the field of Social Education is unlimited and it is like squeezing the river into a small tank if we sort to explain his philosophy under the article in question

CHAPTER R2

Dr S R Ranganathan

V S MATHUR

1 Proud Contact

I AM very happy that a few friends and leading members of the library profession have taken the initiative to celebrate Dr Ranganathan's 71st Birth Anniversary and to present him with a Commemoration Volume. It is customary on such occasions for some of those who have had the great privilege of being closely associated with him during his life to be called upon to write a few words. While I am proud of having received such an invitation, I am also conscious of my own limitations in expressing myself. This task has become much more difficult by the immense impact his personality has had on me and the love and affection which I have all along received from him. When one is full of feelings, it is obviously difficult to express.

2 Sir Maurice Gwyer

I have had the privilege of knowing Dr Ranganathan for nearly two decades. If I remember correctly, my first meeting with him was on the suggestion of Sir Maurice Gwyer, the then Vice-Chancellor of the University of Delhi, who introduced me to him. Sir Maurice held Dr Ranganathan in very high esteem and often used to say that Dr Ranganathan had not only made great and abiding contributions to the Library Science, but had himself produced a large number of very valuable books which themselves constitute a sizeable library.

3 Library Science

One of his earlier books which I read was *Five laws of library science*. This book impressed me immensely and created an interest in and some understanding of library science so much so indeed that I took up work in the Delhi University Library for a couple of years. While working in the Library I had the opportunity of studying a number of other works of Dr Ranganathan and was deeply struck by the depth to which he went while treating apparently simple topics and his mastery of details. I am not competent to comment on his great works on Library Science, but I have no doubt that generations after generations of librarians would continue to profit from them as well as derive their inspiration

4 An Educationist

I got the opportunity of close contact with him during his stay in Delhi in the late 1940's and early 1950's Very few people perhaps know the great contribution he made in the development of Adult Education work in the city of Delhi. Two now quite famous projects, viz The Social Education Department of the Delhi Municipal Corporation and the Delhi Public Library owe a great deal to the inspiration and encouragement which he gave Later on, he started guiding the Adult Education movement of the whole country, and though he has often been reluctant to accept any positions, some of us were able to persuade him to accept the General Secretaryship of the Indian Adult Education Association His great contribution to development of the techniques and methods of educational work was made during the period when he was associated with the Adult Education Movement In an All India Seminar held in the Jamia Millia Islamia, Delhi, on "Production of literature for Neo-literates", while guiding the work of the Seminar, he indeed developed a new technique of conducting Seminars and showed how effectively the Seminar method could be used in educational work Later on when I left Delhi and accepted responsibility for the educational work of the ICFTU in Asia, Dr Ranganathan, at my request, paid a few visits to Calcutta and helped us not only in working out the programme of the College but also in selecting and developing appropriate methods and techniques for our work The Seminar method now is the main method of education which we follow in the College, and though it continues to be modified from time to time according to our experience and requirements, the initial inspiration for using methods which may provide for greater participation of the students in the educational process came from him

5 Embodiment of Work-chastity

Those who have had the privilege of coming in close touch with Dr Ranganathan cannot help but admire his great industry and devotion to his work. It is difficult to count the number of hours he works Perhaps nearly all his waking hours are devoted to the cause of library science and education To emphasise the need to concentrate and devote fully to the work in which one is engaged, he often uses the term "Work Chastity", and he himself is indeed a great living model and ideal of the same. I believe quite a few of our problems in the educational institutions could be easier of solution if only each of us did our own work more consciously and devotedly. However often we seem to do everything else except our own work and this tendency Dr

Ranganathan has often severely criticised and depreciated by emphasising the need for work chastity.

6 A Great Institution

Persons like Dr Ranganathan are really not individuals but institutions in themselves. I join all his friends and admirers in wishing that he may be spared for many more years to guide us and inspire us and to continue his great work in the field of education.

PART S

LIBRARY EDUCATION

CHAPTER 51

Library Education in Perspective

P N KAULA

0 Professional Education

BY library education is meant education for librarianship. It is a process for creating libary-scientists. It is a life-long process and has to be pursued vigorously, with devotion, understanding, and with a set methodology. As professional education, it should be backed by apprenticeship in a library. In fact, a library is a laboratory to understand and test the techniques formulated so far. The apprenticeship period should precede and also succeed the formal training period. It is necessary to give facility to a trainee to observe and apply library techniques. Thus library education has to be on a par with any other professional education.

1 Dewey and American Schools

Dr Melvil Dewey is considered the Father of Library Classification. Being a genius, he could visualise and give practical shape to some of his fundamental ideas regarding librarianship. He was the first to give us a scheme of classification; first to establish a professional organisation; first to start a professional periodical; and first to impart library education. Thus in a way he can be called the Father of Library-profession. Prior to him, it was felt that training was not necessary for work in a library and mere apprenticeship in a library was sufficient. Dewey had to break this tradition and at the same time create a class of professional librarians through formal education. He had to face much opposition in securing for us a professional status; but he went on undaunted as a master-builder and a prophet. He established the first Library School in the world in 1887 in Columbia College, New York. Within seven years after the establishment of this School, United States established three more schools in 1890, 1892 and 1893. Thus the seed for education sown by Dewey in the United States sprouted very soon and gradually took the form of a big tree having thirty-two well established branches. The professional education in U S A is imparted at various levels. U S A was the first country to institute courses leading to Bachelor's Degree, Master's Degree, and to a Doctorate in Library Science.

2 British Schools

Great Britain was the first country in the world to establish libraries through legislation, but it did not for long provide schools for librarians. The need for the formal training of the librarian was not visualised It created a professional organisation only after the United States.

Library-training, however, was taken up as one of the functions of the Library Association. The teaching was all through apprenticeship It was only in 1921, that the London School of Librarianship was established After the World War II, Great Britain established six other library-schools in various polytechnics in the country The instruction leads to a Diploma in Librarianship The library schools have not instituted Degree courses and Doctorate in Library Science The Library Association continues as an examinning body for certain correspondence courses within the country and abroad

3 Indian Schools

31 BARODA SCHOOL

The credit for having initiated library training in India goes to Baroda Baroda has been a pioneer in library movement The appointment of W C Borden as the Director of the State Library Department in 1910, led to the beginning of library education in this country The first training class was started in 1911 Mr Borden had the fortune of having been a pupil of Dr Melvil Dewey in his first batch of trained librarians So he had all the enthusiasm of his master

32 PUNJAB SCHOOL

Another desciple of Dewey was appointed the librarian of the Punjab University at Lahore His name was A Dickinson He started appretinceship training in 1915 and also published a book, the *Punjab library primer* The duration of this training was in the beginning about three months and later reached to six months It was a part-time course and continued to be so till the Partition of India in 1947

33 MADRAS SCHOOL

It was left to Dr Ranganathan to give a fillip to library education in the country. After having established the Madras Library Association in 1928, he started its first Certificate Course in Library Science in 1929 Through his drive and personality, he made the Madras University start a Diploma Course in Library Science in 1931 This course was the first full-time training course in the country The Madras School has greatly influenced library thought and created library-scientists for the first time in our country. In 1937, it was made a post-graduate course. In 1960, it made it a B Lib Sc Course. It has also provided for M Lib Sc and Doctorate Courses.

34 BENGAL SCHOOL

The Bengal Library Association, under the inspiring leadership of its President Kumar Muninder Rai Mahasai, arranged a library training camp at Banasberia in 1935 It was held under the auspices of the Hooghly District Library Association The Bengal Library Association started a regular Certificate Course in Librarianship in 1937

35 IMPERIAL LIBRARY SCHOOL

The Imperial Library, now National Library, at Calcutta also started a part-time training course under the guidence of its late librarian, K M Asudullah in 1935 This course continued up to 1945

36 ANDHRA SCHOOL

Another training course was started by the Andhra University in 1935 This Course was on the pattern of the Madras University course

37 OTHER SCHOOLS

During the 1940's, several universities started training courses in Library Science on the pattern of the Madras School Diploma Course in Library Science of one full-year duration was instituted in the universities at Banaras, Bombay, Calcutta and Delhi in 1941, 1944, 1946, and 1947 respectively In the 1950's some other universities also established library schools The universities at Baroda and Nagpur started their Courses in Library Science in 1956 In 1957, the Vikram University at Ujjain started its training course In 1958, Aligarh University started a similar training course leading to a Bachelor's Degree in Library Science The Punjab University instituted a Diploma Course in 1960. The universities of Rajasthan and Kerala also started Library Schools in 1961

38 ASSOCIATION SCHOOLS

Professional organisations in India were the first agency to organise training course in the country. Some of the State Library Associations have been regularly conducting Certificate Courses in Library Science in their respective areas Andhradesa Library Association, now Andhra Pradesh Library Association, was the first in the field. The others include the Bengal Library

Association, Bombay Library Association, Maharashtra Library Association, Gujarat Library Association, Hyderabad Library Association, Government of India Libraries Association, Delhi Library Association and U P Library Association

391 SCHOOLS FOR HIGHER STUDIES

At the invitation of the Late Sir Maurice Gwyer, Dr Ranganathan organised the Department of Library Science in the Delhi University in 1947 This university has been the first in our Commonwealth to conduct Master's Degree Course and Doctorate Course in Library Science besides the Diploma Course as conducted by the other university schools. The writer of this paper is fortunate to be the first to earn a Degree from this university He earned it in 1949 The Institute of Library Science set up at Delhi University in 1959, has taken over the Department of Library Science Besides this school, the Madras University organized a separate Department of Library Science in 1960 and instituted similar courses in that university.

392 SARADA RANGANATHAN CHAIR IN LIBRARY SCIENCE

Dr Ranganathan donated his life's earnings amounting to a hundred thousand rupees to the University of Madras in 1957 to institute the Sarada Ranganathan Chair in Library Science, in the name of his wife This is perhaps the first endowed Chair in Library Science outside the United States

4 Particulars of the Courses

41 DURATION

There are two kinds of agencies imparting library education in the country *viz* 1 Universities, and 2 Associations The training in a university is of the nature a full-time Diploma or a Bachelor's Degree Course The duration of these courses is one academic year Delhi University conducting M Lib Sc Course is of two year's duration, the first year being the Diploma or B Lib Sc Course Aligarh University and Rajasthan University are conducting a half-yearly Certificate Course Aligarh University conducts two sessions in a year since its inception in 1951. Madras and Andhra Universities also have been conducting a Certificate Course of three months

The Associations are conducting Certificate Courses of 3 to 6 months duration The Delhi Library Association is conducting a Certificate Course of one year's duration since 1955 The Government of India Libraries Association was till recently associated with a Diploma Course The Courses conducted by the Associations are part-time courses.

42 Syllabus and other Details

No uniform standard has been maintained in imparting library education by the schools This is due to the lack of a common pattern The standard, the duration of training, papers offered, qualifications for admission, scope for practical training, quality of teaching, and methodology of teaching differ from centre to centre In universities, classes are conducted in the premises of the university libraries which also provide facilities for practical training But so far only two universities have created independent Departments of Library Science. The Associations conduct their courses in some libraries and make provision for their practical training in other libraries too. The syllabus, curriculum, method and standard of teaching and examination, essential qualifications for admission, provision for practical training, and finally the duration of such courses vary from centre to centre.

Most of the papers in the curriculum of post-graduate courses and undergraduate course appear to be common but with a wide difference. While some schools have been teaching the latest techniques in the subject based on a comparative study, a large number of schools still practise old methods and systems These centres imitate the pattern of the West and have developed some sort of resistance in them to understand and introduce the recognised Indian methods and systems This is in many cases due to the fact that the origin and development of library education in the country came from the West and the teachers happen to be the persons who knew only those outmoded and discarded principles and practices

43 Accrediting Agency

All the American Library Schools have recognized the American Library Association as the accrediting agency This was due to the setting up of the Committee on the School of Library Economy in 1886, prior to the establishment of the first school The Committee was named Committee on Library School and Training Classes in 1895, Committee on Library Schools in 1897, Committee on Library Training in 1901 In 1915 the Association of American Schools was also established In Great Britain the Library Association in itself is conducting the examinations for all the Library Schools, except the one at the University of London, and so there is little room for variation

5 Teachers

51 University Schools

In universities, the teaching is conducted by overworked librarians and their staff The standard of teaching varies from school to school. Of course, the standard of examination need not be questioned. Part-time teachers is an anachronism in Indian library education. In some universities no allowance is paid to the library staff for the extra work of teaching Some universities have recruited a full-time staff for the training, but they are also assisted by part-time teachers. Aligarh University was the first university in India to appoint a full-time lecturer in 1956 At present the Delhi, Aligarh, Banaras, Calcutta, Nagpur, Vikram, Madras, Kerala, Rajasthan, and Punjab universities have appointed one or two full-time teachers Delhi University and Madras University have a sufficient number of full-time teachers Delhi University created the first full-time Reader's post in 1958 to which the writer of this paper was appointed. Madras University created the first Professorship in Library Science in 1960 The Rajasthan University has also created a post of a full-time Reader in 1961 The position of other schools is however different It is generally the librarian of a university who is appointed as the Head of the School of that university In these universities, the Department of Library Science is not distinguishable from the university library and the bulk of the teaching is shared by part-time teachers The position of full-time teachers in India is as under:

University	*No of Teachers*			
	Professor	*Reader*	*Lecturer*	*Total*
Aligarh	—	—	3	3
Banaras	—	—	1	1
Calcutta	—	—	2	2
Delhi	—	2	4	6
Kerala	—	—	2	2
Madras	1	1	2	4
Nagpur	—	—	1	1
Punjab	—	—	1	1
Rajasthan	—	1	3	4
Vikram	—	—	1	1
Total	1	4	20	25

In the Institute of Library Science set up at the University of Delhi in 1959, the Director is having the academic status of a Reader The Delhi University had Dr Ranganathan as a full-time professor from 1947-55 When he left that university in 1955, the teaching of the University School was much affected and as a result of it, the Master's Degree Course had to be suspended till 1959 when a full-time Reader was appointed The post of the Reader is still unfilled since April 1960, when the writer of this paper left it

52 ASSOCIATION SCHOOLS

The teaching in courses of library associations is conducted by teachers on part-time and voluntary basis. "But competence to teach and to maintain the standard is what should be the first criterion of such teaching. This is not generally kept in view because a competent person may not be prepared to do voluntary work for the profession Hence many of the courses are suffering from want of competent teachers"[1]. It has been observed that in certain centres the teachers are even Certificate holders to teach the Certificate Courses Perhaps the Indian Library Association can standardise the Certificate Courses if at all any attempt to standardise the courses are made. But it can be done only when ILA is brought back to normal life

6 Training Requirements

61 LEVELS OF TRAINING

India needs an army of trained librarians Dr Ranganathan has already estimated the library needs of India He has laid down that the country will need 1,20,000 trained library personnel when the library personality reaches its full stature He has classed the trained personnel into the following categories

Level	*Professional qualification*
1 Leaders	Ph D
2 Semi Leaders	M Lib Sc
3 Professionals	B Lib Sc/Dip Lib Sc
4 Semi Professionals	Cert Lib Sc

The training of these categories of personnel has been estimated on yearly basis It has to be 20,40,240, and 3700 respectively

62 DEARTH OF TRAINED PERSONNEL

The development of libraries in India is disappointing. There is yet no library legislation except in Madras and Andhra Pradesh. The dearth of trained librarians in these States is too well known to be recorded here. What would be the position when the other States also enact library legislation?

"The establishment and maintanance of a net-work of libraries will depend solely on well trained library personnel "

63 GOVERNMENT'S PLANS

The Government had declared in the First Five Year Plan to have integrated library service and establish central and district libraries By the end of the Second Five Year Plan it was proposed to have State Central Libraries in each State and 320 District Libraries The Third Plan aims at completing this target Thus in spite of the slow development, India needs a large number of trained personnel at all levels

64 TRAINING CENTRES

There should therefore be different levels of training centres The existing centres are insufficient even for the present day needs when the library development is at a low ebb To train about 4,000 persons at different levels every year, will need many centres The teaching has to be at Certificate, Bachelor's Degree, Master's Degree and Doctorate levels The courses have to be re-oriented Teaching methods have to be improved Tutorial methods and Seminar methods have to be introduced Refresher Courses also should be conducted at all levels The experience at Varanasi of conducting a Refresher Course by the U P Library Association in 1961 for two months has resulted in introducing the latest techniques in almost all libraries in Varanasi

7 Training of Teachers

All these developments will depend on the quality of teachers As stated earlier, the existing schools suffer from want of competent teachers Most of the centres are run by part-time teachers who are running libraries Even the few full-time teachers have little experience in the methodology of teaching This results in lowering down the standard of education Absence of qualified teachers has created a vacuum in the country Senior posts have been created in several libraries but have not been properly filled Even in the teaching line, Reader's posts created in two universities years back could not be filled so far In a centre where higher education ought to have been imparted by senior qualified teachers, either the teacher is not recruited or if one is there, he is not able to take classes Notes are being prepared and distributed and that too by inviting outsiders There is no proper tutorial method and there is hardly any seminar method Thus there is need to train teachers in library science A training Institute for teachers in library science is a necessity if better librarians are to be produced at all levels.

71 RANGANATHAN'S EFFORTS

Dr Ranganathan has been depressed over this state of affairs regarding the teaching of library science and the quality of the teachers Each year he has been on his own initiative and at the request of the Madras Library Association, conducting a six weeks' course to train a few teachers in library science at Bangalore But that is not sufficient. It is improper to call on Dr Ranganathan to do everything even at this old age of his. The University Grants Commission should organise a College for the Teachers of Library Science in the country.

72 FACILITIES FOR RESEARCH

India has practically no facilities for research in library science. In spite of the unique contributions made by India and the material for research work created by her through the writings of Dr Ranganathan, the country has been starving in the field of research India has produced only one person with Doctorate in Library Science from one of its schools And when was the Doctorate Course instituted? It had been there since 1949 How sad it is that others willing to do research are denied the facilities The University Grants Commission should provide fellowships for research in library science In the United States nearly a hundred young persons have earned their Doctorate in Library Science and several are on the march "That country is turning so many of its young citizens on this science, not because it has a superfluity of men, but because it is convinced that, in a modern democracy, research in library science is necessary for social betterment " The research atmosphere will ultimately lift to progressively high levels the standard of the training at all levels

73 PUBLICATION WORK

India has produced an appreciable number of publications Most of them are from Dr Ranganathan There is a negative record of the publication activity of the library schools in India Except the Delhi School and that too when Dr Ranganathan was there, no other library school in India has produced any work so far That shows that the schools are not virile and the teachers are unconcerned about What is still more disappointing, is the lack of urge among the teachers and the taught even to contribute to library periodicals India should shake off this inactivity in library profession. It cannot trade for long on the contributions of Dr Ranganathan. Standard works should be brought out by university schools, and professional periodicals should be created and fed by some of the schools. Till publication activity is undertaken as a responsibility of a library school, library education in India will not yield adequate results.

8 Analysis of Teaching

81 GREAT BRITAIN AND USA

It would be helpful to analyse the teaching standards of library schools in some of the countries In spite of being the first country in the World to enact library legislation, Great Britain has yet to institute advanced courses in library science The subject is still known as librarianship On the other hand, the United States has caused a revolution in library science All the 32 schools provide for Master's Degree in Library Science Seven schools have provision for Doctorate in Library Science Under-graduate minors are provided for in 5 schools The total number of candidates enrolled for various courses in 1959 was 4,435. They include Ph D, M A, B L S, Special students and Undergraduate minors

Both Great Britain and the United States have produced an appreciable literature on library science But perhaps very few standard books have been brought out by the schools of library science A few professional periodicals are brought out by library schools There is the Association of American Library Schools set up in 1915 which is also bringing out a periodical from 1960 There is, however, no specific training for teachers in library science available anywhere, and there is a need for it

82 INDIA

India is much advanced in library science and holds the top position in the East and perhaps in the West too But the teaching imparted in 15 library schools is not up to the standard At the Unesco Regional Seminar on Library Development in South Asia, India demonstrated her ability in understanding library problems and also having taken big strides in library education As stated in earlier chapters, there is a vast difference in what India has been preaching and what she has been teaching Indians still go abroad for training in library science, though it is available within their country It is perhaps due to lack of facilities and inducement that some of them still prefer foreign goods even though their country has produced finer variety

821 RAY OF HOPE

It was suggested in 1957 at the time of the First Delhi Library Conference that "to improve the standard and efficiency of the existing centres and to chalk out an agreed syllabus and curriculum at the universities, initiative has to be taken by the librarians-in-charge of such training centres They should meet together and discuss the problem of library education and give a lead to the country. Of course they can meet under the chairmanship of the Master-Architect in Library Science—Dr S R Ranganathan They should also invite the President of the Indian Library Association and the Directors or representatives of other training centres. If the Government could arrange such a meeting, it would be ideal The details can be filled up competently by such a Committee. Perhaps the University Grants Commission can take the inititative in the matter." It has been possible to review and standardise the teaching of library science in India. The University Grants Commission has appointed a Review Committee on Library Science with Dr Ranganathan as Chairman to go into this matter The Heads of the Departments from some of the University Schools are its members It is hoped that the Committee will go into the details of the syllabus, facilities for teaching, qualifications for teachers, facilities for research, and set standards for the teaching of library science.

91 A Step by the West

A Joint Committee meeting of the Board of Education for Librarianship of the American Library Association and the Chairman of the Registrar of Examinations Executive Committee of the British Library Association, was held at Urbana in August 1959 It was also attended by the President of the Canadian Library Association, Chairman of the Committee on Accreditation of ALA, and the Executive Secretary of Education Division of ALA The meeting studied the problems of library education and the equation of professional library qualifications in library schools in their countries The committee recommended that to be professional librarians·

1 Successful completion of a course of study in an institution of higher education, leading to a university degree or diploma, and
2 Successful completion of at least one academic year of professional postgraduate study in an approved full-time library school leading to a professional degree, diploma or other recognized credentials

A similar meeting was held at Montreal in June 1960 and it was decided to raise the professional level of education on both sides of the Atlantic

92 What India should Do

To raise the standard of professional education, several steps shall have to be taken in India These are as under

1 Library education is a professional education and so it should be supplemented and augumented by laboratory work Before joining a formal course, a candidate should undergo an apprenticeship period of at least 4 months in order to familiarise himself with the working of the library. This will enable him to follow with ease the theoretical and practical analysis of each problem After the formal training period, he should again be an apprentice at a recognized library for about 4 months It

will help him to apply the techniques he has learnt for practical use He will be then equipped to shoulder any responsibility in the profession

2 Teachers should be induced to introduce tutorial method, seminar method and discussion method Mere lecturing should be avoided

3 Teachers should undergo a period of training and learn the methodology of teaching.

4 Refresher Courses should be conducted for teachers to acquaint them with the latest ideas on the subject

5 Refresher Courses should be arranged for trained librarians who have no time and interest in studying by themselves

6 Diploma Course should be changed into Bachelor's Degree with uniform syllabus, rules of admission, qualification for admission etc

7 Provision should be made for Master's Degree in Library Science at least in two more universities with full teaching facilities

8 Full-time staff should be provided in all the schools

9 Department of Library Science should be made an independent department of the concerned university

10 Publication work and periodicals should be started by schools of library science imparting advanced training in library science

11 Fellowships should be provided for advanced study in library science

12 An association of teachers in library science should be formed to discuss educational problems for training in library science

13 Standard textbooks should be translated into Hindi and the other regional languages

14 Certificate Course in Library Science for the semi-professionals be standardised by a committee set up by the State Associations conducting the courses

15 UGC should provide adequate grants to provide full teaching facilities in the university library schools

16 The State Governments should provide adequate funds to provide proper teaching facilities at the semi-professional level

CHAPTER S2

Dr Ranganathan and Library Education

ASHA KAULA

0 Conception of Dr Ranganathan

IT was in 1952 that I met Dr Ranganathan in New Delhi for the first time. Prior to that I had heard of him from other librarians and I had a different conception of this eminent personality. This conception proved to be wrong when I saw in him a person with beaming face, radiant eyes, affectionate heart, and saintly outlook. He asked me whether I would also become a librarian and that was all. Little could I imagine at that time that I was destined to be a librarian and serve in the library-profession. Perhaps it was the farsightedness and prophecy of Dr Ranganathan that finally prompted me into this profession. I was, however, not aware about the vast literature on the subject and could not much appreciate the profound and original contributions of Dr Ranganathan. It is true that my husband was one of his disciples, but he would talk to me little about this subject, since he was most of the time away from his home—in his library. I was not also able to appreciate his long absence from home and his deep interest in the subject, which according to many at that time was not a discipline. I wondered whether this subject required so much attention.

01 INJECTED INTO LIBRARY SCIENCE

Gradually I was injected into the subject and finally made to get myself trained in Library Science. It was then that I came to know of the vastness of the subject and the fundamental contributions of Dr Ranganathan. In fact, the training that was imparted to me was not very comprehensive and I remained partially blind to some of the latest developments in Library Science. I was however convinced that Dr Ranganathan was a master-mind who had contributed much to raise the level of library education. My vision became still brighter when I joined another university to have further education in Library Science after having worked as a Librarian for some years. The theoretical exposition of the subject and its branches, the scientific methodology and the analytical, lucid, and seminal description, the sharp devices and tools on the subject were all the creation of Dr Ranganathan.

1 Fountain-Head of Library Science

Dr Ranganathan is perhaps the greatest living Library Scientist of the day He is also the most prolific writer on Library Science, and above all, the Father of Library Education Some call him the greatest theorist of the subject that the world has ever produced, some analyse him as a philosopher and mystic in Library Science, some regard him as the fountain head of classificatory thought; some take him as the greatest advocate of library cause, some make him an ideal for their life; some consider him a versatile personality, some regard him as an exponent of intricate ideas and terminology, some admire him for singleminded devotion to the persuit of library science, and yet some criticise him for neglecting himself and his family But one has to admit, here is a man who is a multifacted genius in Library Science, who has not availed of a single day's casual leave during thirty years of his career, who has lived in the library itself during this entire professional career, who has not been out of station for years together, who has invented library techniques and the methodology of documentation, who is the founder of professional associations, who is the brain behind library-legislation in India, and who has secured for India a leadership in library science in the world Above all, he is the Library Science in India Library-education in India today is the study and interpretation of Dr Ranganathan's ideas, methodology and work

2 Teaching Techniques

Teaching is an art of communicating the ideas into the minds of the taught with ease. It is a common practice to find even academicians as poor teachers Rarely do we find academicians as good teachers The art of teaching is a methodology through which an academician can open his mind before the taught, and inject into his mind, the subject that he would be teaching A good teacher is one who not only is able to inject the mind of his taught expedetiously with ease but is also able to learn from the taught He should be able to make use of the talents of each one of the person whom he is teaching and induce them to think, to speak and to write properly Dr Ranganathan is one of those rare teachers who is a master of the teaching techniques, who has transformed the life of several students, who has made the dullers to apply their minds, who has made dumb students to speak, who has made shy students bold, and who has turned ordinary students into scientists The versatility of the teaching technique of Dr Ranganathan is acknowledged even by the seasoned teachers and educationists His teaching methods function like an alchemy, which turns raw metals into gold.

3 Teaching of Library Science

Prior to his coming into librarianship, Dr Ranganathan was a teacher of mathematics at the University of Madras. He therefore brought into librarianship the qualities of a teacher. His interest in teaching made him start a Certificate Course in Library Science in 1929, and the first Diploma Course in Library Science at the University of Madras in 1931 He delivered lectures to teachers and students alike on library science, he was the first teacher to impart teaching both as a professional as well as a methodical teacher. He did not believe in the traditional lecture method and therefore introduced for the first time the other methods of education It was a common practice for him to conduct seminars, hold tutorials and teach through discussion. Library science was raised to a professional subject by Dr Ranganathan, through his teaching methods. Whereever he went, he introduced the same methods with vigour, skill and efficiency. It was as a result of his teaching methods that he was able to produce a number of librarians who have themselves become very good teachers Learning through books, comparative study, scientific analysis and clear exposition, at times supported by anecdotes, are the teachniques he has given to library science

4 Professional Education

Professional education commonly known as education for librarianship was started by Dr Melvil Dewey in 1887 in the United States Today the United States has got 32 Schools of Library Science imparting instruction at the Master's Degree and Doctorate level Great Britain established the first school in 1920, and after 1946 created six more schools But education imparted in these schools has been only at the Diploma level It has yet to start instructions leading to a Master's Degree and a Doctorate

In India, professional education was started at the university level by Dr Ranganathan in 1931 The Madras School of library Science started a Diploma Course which has influenced the entire library education in the country. There are at present 15 Schools of Library Science in India, one of them imparting education leading to a Master's Degree and a Doctorate in Library Science

5 Architect of Library Schools

Dr Ranganathan is the architect of professional education in India He not only created the Madras School and helped in creating other schools, but produced profuse professional literature based on originality and on scientific foundations Due to his own contributions, a new methodology in teaching was evolved by him A comparative study of the existing practices, with the techniques and practices invented by him, created a scientific outlook and paved the way for a systematic study of library science As a result of this, the merits and the demerits of the techniques came to the lime-light for the first time in the world.

6 Indian School of Thought

Dr Ranganathan is the creator of a new school of thought. His contributions in every branch of library science have developed new thinking over the traditional practices All his contributions are creative, original, and scientific The study of his contributions originally from the Madras School of Library Science, gradually got into all the schools of library science in India His contributions have created a stir in the library thinking, not only in India but throughout the world His theories and practices in classification and cataloguing have influenced the library thought in those subjects, in almost all parts of the world. His works have become classics, and several works have appeared on them from other countries. In India, the advanced professional education is nothing but an interpretation of Dr Ranganathan's ideas The Indian school of thought is now recognised by other specialists on the subject An International Conference on the Study of Classification was held in Dorking (England) in May 1957, to study the contributions of Dr Ranganathan in classification It decided that the future classification should be on the faceted pattern as evolved by Dr Ranganathan. The Classification Research Group has designed 20 classification schedules for certain subjects and all of them are in the faceted pattern. In the field of cataloguing, Dr Ranganathan laid new ground and created a code for a classified catalogue He also laid new ground for subject headings He called it the Chain Procedure The world adopted it and named it the Chain Indexing Thus the Indian school of thought created by Dr Ranganathan has influenced the library practices and education

7 The Future

Dr Ranganathan's contributions to Library Education are far ahead of his time That is one of the reasons why he is not easily understood in several quarters The traditional pattern of education and the traditional practices have however stood in the way of new thinking and techniques Some persons have come out to defend the out-moded practices and not to accept the new ideas. That is the tyranny of the tradition They have even gone to the the extent of ridiculing the revolutions in library science created by Dr Ranganathan Dr Ranganathan like a true scientist has been moving ahead single-handed in spite of the staunch opposition by the old guards The new generation who have learnt the latest techniques in library schools, are convinced about the superiority of the Indian techniques Dr Ranganathan has been carrying on the burden of education by himself and it is unfortunate that during the last 30 years, he has not been able to produce even a half a dozen devoted library scientists to carry the work further He has created ample scope for research in library science which has to be taken by the profession in India The Delhi School of Library Science which was started by him to promote scientific study and research, is now far from it. Decay and deterioration has set in and steps have therefore been taken to establish a Documentation Training and Research Centre at Bangalore under the Directorship of Dr Ranganathan.

The teaching in library schools should however be brought in consonance with the recommendations of the Library Committee of the University Grants Commission U G C has already appointed a Review Committee on Library Science under the Chairmanship of Dr Ranganathan to go into this matter. It is hoped that Dr Ranganathan will be able to improve the teaching standards of the existing schools through this committee.

71 A CHALLENGE

One point, however, remains unresolved After Ranganathan what ? Even during the time of Dr Ranganathan, hardly any librarian has become really a library-scientist of a high order Research in library science has yet to take its root and above all no one has been able to carry forward the professional knowledge imparted by Dr Ranganathan On the other hand, the seedling of Indian school of thought has sprouted itself in a distant land Indian library profession has to think whether they want to leave it to others to interpret and carry forward their ideas Library science in India should not be allowed to meet the fate of Buddhism

CHAPTER S3

Dr Ranganathan's Humanisation of Teaching Technique

A KRISHNAN

1 Anecdote and Analogy in the Technique

I WAS not a student of Dr S R Ranganathan (hereafter referred to as SRR) while studying library science either in the Diploma Course in Calcutta or in the Master's Course in Columbia University. However, during the last two years, I have had the privilege of listening to two courses of his talks in Delhi and one in Bangalore. His method of exposition and teaching technique struck me as a powerful one. I had not experienced this technique either in my library science courses or in my earlier undergraduate courses. There is no dictation of notes in his technique. Passive hearing is not possible. There is a continuous give and take between the teacher and the taught—not merely just one among the taught but each one. Another feature of his teaching technique is the humanising element whenever a difficult or obstruse point has to be driven home. There are various such situations in which a new idea brought out is dowered with life. In certain situations this is done by the narration of an experience of his or an anecdote. In others it is done by drawing an analogy from a folk tale or a piece of literature. Such an analogy is shown to be seminally identical or equivalent to the point driven home.

11 ADVANTAGES OF THE TECHNIQUE

I find the following advantages in such a use of anecdote and analogy.

1 The speed of thinking is comfortably reduced in difficult cases by the anecdote or the analogy acting as a roughage.
2 This method invests the abstract ideas with an anthropomorphic flavour. An immediate establishment of a certain familiarity with the abstract idea is a result of this. This enables each one to see in the abstract idea a picture of some experience or other of one's own.
3 The anecdote or analogy leads consequently to a better grasp of the abstract idea pursued.

4 It also gives a certain intimacy with the new thought. This intimacy makes the new thought more dynamic and productive in the mind of each one in the audience

5 There is above all an all-pervasive health-giving pleasant emotional appeal in the exposition of the subject

6 This method develops a sense of imagery in the understanding of a theoretical abstract idea This sense invests the idea with an element of practicality and concreteness

7 It also leads towards a peep into the seminal depth in which is found a single pattern of which several of the ideas belonging to the diverse fields of library science—and indeed of any subject—appear as mere manifestations of one and the same seminal idea in different subject-contexts The realisation of this identity is by itself a source of joy, if not of delight.

8 It further reduces the load in memory. It makes our own thinking more versatile It is somewhat like carrying a cheque book whose leaves can be exchanged for any commodity needed from time to time rather than carrying the entire burden of all the different commodities themselves likely to be needed from beginning to end.

9 A further advantage found in SRR's technique of teaching is that thinking is channelised purposefully instead of spending itself out desultorily devoid of any conscious control or direction.

12 Illustration

I am giving below some illustrations of the humanisation in SRR's method of teaching technique

2 Reiteration and Repetition

21 As a Technique in Teaching

The course in Bangalore was partly for lecturers in library science It therefore included teaching technique He insisted quite often on the importance of reiteration and repetition in teaching technique Here is the substance of the point he made

In almost every lesson, a new thought-process or a new concept or a new turn of expression or a new turn may be hit upon Merely mentioning it once will not help in the idea sinking into and getting integrated with the apperceptive mass of the students He may appreciate it during its first mention. But the mere mention of it can not enable him to make it his own It will not be brought within the range of reflex action. This failure of the student to bring it within the range of reflex action will prevent him, in all the later lessons, from absorbing or even understanding the further thought built upon the new idea as basis. The method of teaching should establish as early as possible reflex action in respect of the new idea A method of securing this is to put several questions to the students, involving the new idea and to make them give the answers in precise terminology and in full sentences. For, terminology and idea are inseparable

22 ANALOGY OF PARVATI PARAMESHWARA

In driving home the inseparability of the idea and terminology, SRR used the following analogy

The medieval poet Kalidasa had clinched this point in the first verse of his poem *Raghuvansa* There he uses the mythological concept that Parvati and Parameshwara—God as woman and God as man—stand integrated into one body. Kalidasa says in that verse that Parvati and Parameshwara are as inseparable as an expression in words and the idea expressed He invokes the grace of the integrated God for his getting the precise term for each of his own ideas in the poem being produced

23 DEMONSTRATION OF THE TECHNIQUE

SRR demonstrated this technique in a very natural way when he made this new point He put to each of the persons attending the course questions bearing upon the point He insisted on the precise answer being given in precise terminology and in full sentences This he continued to do until an absolutely flawless answer came from every body In this process, he himself had to repeat each question many times in full sentences in precise terminology He said that the teacher should not be tired to such a repetition He used to relieve the students themselves from being bored by this reiterative process by introducing some humour now and then

24 ANECDOTE OF A SANSKRIT TEACHER

He finished off this lesson in teaching by saying that he learnt the essentialness and the value of the method of reiteration and repetition from the method of teaching adopted effectively by a teacher of Sanskrit language, experienced by him when he was a lad of fourteen

A great scholar was teaching Sanskrit grammar to some adults in his village. A poem of Kalidasa was used as the text Each of the students had to conjugate or decline each of the words in each verse This by itself meant an enormous amount of repetition This was further intensified as follows On every occasion, whenever one of the students went wrong, the teacher would himself repeat the whole of the conjugation or declension without flaw, and then ask the student to repeat it. This looked like an unending process, for, it would not end until every one of the students repeated it without flaw. However, whenever there was a sign of boredom on the face of the students, the scholar would narrate some spicy anecdote on the learning of grammar. This would throw the whole group into a peel of laughter and shake off the boredom The repetition would begin again. Reflex action was thus secured Many years later, SRR having himself become a teacher, discussed this method with that scholar The scholar said, "This technique has been handed down to us by our Vedic tradition Repetition without boredom was a characteristic of the Vedic text itself" SRR said that it was indeed so in all first rate texts such as the "Holy Bible".

3 Course on the Universe of Knowledge

31 THE HOMONYM "UNIVERSE OF KNOWLEDGE"

The courses of talks in Delhi were given to the staff of Insdoc. They were on the Universe of Knowledge At the outset, SRR emphasised that the term "Universe of Knowledge" was a homonym He the enumerated the various disciplines having the "Universe of Knowledge" as the core These were as follows

1 *Psychology of knowing* It deals with the primary senses as the channels of knowledge and with percepts, concepts, characters of consciousness, and factors in cognition
2 *Logic* It deals with the methods of inference in building knowledge
3 *Scientific method* It deals with the spiral in the development of a system of knowledge consisting of the following sectors

  31 Sector one concerns the finding of facts through observation and experiment with the aid of the primary senses with or without their extension bv mechani cal aids,
  32 Sector two concerns the formulation of empirical laws, abstracted from thefacts of sector one, through induction and statistical methods, with the aid of intellect,
  33 Sector three concerns the formulation of fundamental laws or normative principles, abstracted from the empirical laws of sector two, with the aid of intuition,
  34 Sector four concerns the formulation or derivation of deduced laws from the fundamental laws of sector three through deduction, with the aid of intellect; and
  35 Sector one once again concerns the verification of the new deduced laws through observation and experiment.

A crisis may be formed by contradiction between facts and the deduced laws. The above cycle is then again repeated and new fundamental laws are formulated so as to resolve the conflict. The cycle may have to be repeated in this way *ad infinitum* giving rise to the spiral of scientific method

4 *Epistemology* It concerns the diverse sources of the knowledge for the knower knowing the knowee
5 *Metaphysics* This concerns the reduction of all the phenomena in the universe of knowledge to a few ultimates
6 *Teaching* This concerns the induction of the younger members of the community into and understanding of the universe of knowledge and into capacity to expand that universe
7 *Authorial work* This concerns the creation and expression of items of knowledge so as to facilitate their communication to others
8 *Pre-historic account of the universe of knowledge* This concerns the state of the universe of knowledge during the iron age, the copper age and the other prehistoric ages
9 *Universe of knowledge Its development and structure* The objective of this discipline is not that of any of the other eight disciplines concerned with the universe of knowledge On the other hand, its objective is to establish a basis for the design of a scheme of knowledge classification with which all recorded knowledge can be classified and organised so as to enable any reader to pick up all his relevent documents unerringly and without waste of time

These were elicited by SRR from the members of the audience by a series of questions

32 Dangers of Homonym

After listing the nine disciplines, he pointed out how a student would get confounded if exposed to the teaching of the universe of knowledge by specialists in all the nine disciplines He described the ninth discipline as the food needed by the students of library science This food could be prepared only by the right cook No food will result if the task is entrusted severally or collectively to the other eight specialists

33 Analogy of Three Specialists

This was illustrated by the story of three specialists jointly endeavouring to prepare food The specialists were a musician, a doctor, and a metaphysician The musician was asked to boil rice The doctor went out to buy vegetables. He found no vegetable free from any pharmacological defect Therefore he could not buy any vegetable He had to return home empty-handed. The metaphysician went out to buy ghee (melted butter) On his way back, he began to think out the ultimate implication of mutual support He began to verify whether the vessel supported the ghee or the ghee supported the vessel He therefore returned home with an empty vessel These two reached home simultaneously To their dismay they found the pot broken, the half boiled rice scattered and the musician in a rage. The sound of boiling did not keep time in conformity to the rules of music This enraged the musician, and he dashed the pot to the ground. They all had to go hungry.

34 STUDENTS GOING HUNGRY

Something similar happened recently to a university class on classification Twelve years ago, that university prescribed "Universe of Knowledge, its development and structure" as one of the subjects of study for the Master's degree in library science There was also a detailed syllabus on this discipline But recently, the expert appointed to teach the subject filled the notebooks of the students by notes dictated on the "Universe of knowledge in stone age", "Universe of knowledge in iron age", "Universe of knowledge in copper age" and so on. The students were confounded They could not find any help from this in the study of knowledge classification for which it was intended to be a help Nor did they find the notes dictated to tally with the details in the syllabus But the new expert asserted that the syllabus was wrong.

4 Storage of Newspaper Cuttings

Some of us visited a research library The documentalist explained the techniques and the procedure followed in the storage and retrieval of micro-documents In the course of this, a huge massively bound volume with several newspaper cuttings pasted down on each page was thrown open The cuttings were all pasted chronologically The following conversation ensued on this occasion·

SRR This chronological sequence can serve nobody Each cutting should be mounted on a separate board, classified, by its subject and put in a vertical file cabinet in a classified sequence

D (Documentalist) Our readers' approach to the cuttings is through their dates

SRR Is this approach more frequent than the subject approach ?

D Yes

SRR . It is news to me Even granting it, can your readers remember the exact dates of the cuttings ?

D Yes, they do

41 ANECDOTE

SRR : This seems extraordinary to me I shall give you my own experience in this matter of memory of dates A senior professor once walked into my room evidently shaken with bad temper He said, "Your reference librarians are making a mess They derange the books on the shelves It is all a mess in the stack room We can not find out what we want nor can they find it for us All the five of your boasted Laws of Library Science are being violated" I asked him to sit down for a while and tell me what he wanted He said, "Only six months ago, I borrowed a fat red book Today, I go to the stack room to pick it up It was originally in the physics shelf It is no longer there." Then I gathered from the professor that he wanted the book for reference in connection with a lecture to be delivered by him on the social benefits of science I wrote on a slip of paper and sent it with a boy to the reference librarian in the stack room Within a couple of minutes, three pamphlets arrived. The professor glanced through the pages of each of them and identified the contents of one as what he had perused by taking it on loan six months earlier He said to himself, "What a memory I remembered it as a fat red book" He then looked for its call number on the date label "I thought it belonged to my own subject 'physics' which you number as 'C'. But it is 'A' here". I then asked him to look at the last date of borrowing. "It was two years and not six months earlier". The professor complained of the treachery of memory

All Laughter

Head of the Research Institution I myself would never trust my memory about dates I often imagine that I did a certain thing a month ago But it turns out to be a year ago

5 Sequence in the Schedule of Materials

51 WORK IN THE IDEA PLANE

Since 1950, SRR has been endeavouring to establish once for all an exhaustive schedule of raw materials, intermediate commodities of all removes, and ultimate commodities In one of his visits to Delhi a year back, he referred to this unfulfilled wish of his This stimulated me to spend this year's holidays of mine with him and engage myself in building the schedule At one stage, we found the need to make some partially comprehensive groups of materials and commodities on the basis of their collective utility as characteristics Three of these groups were:

1 Building materials,
2 Food materials, and
3 Clothing materials

We had thus to decide the sequence of shelter, food and clothing. I suggested food materials as the first of these isolates But SRR suggested shelter as the first. My argument was that food was the primary necessity for one's own existence But SRR's argument was that the race should have priority over the individual and that shelter was the primary necessity for the propagation of the race. The following was the furthur elucidation of his argument.

52 Analogy from the Phylum—Birds

Consider the race of birds No doubt, food is the primary necessity of a bird. Perhaps it may not even need a nest to live in For it spends the day-time in the open and also sleeps during night-time resting on the branch of a tree in the open. But it builds a nest to lay its eggs in. The nest is then continued as the shelter for its young ones The extraordinary persistence of its building the nest—at times even neglecting its own food—shows the priority instinctively given by the bird to the shelter—needs in propagating its race, even over its own food. As for food, it shares its own food with its young ones Food is not therefore a new problem for it On the basis of a living organism giving greater weight to shelter in the interest of race propagation than even to food in the interest of its own existence, in the arrangement of the commodity groups in an array, building materials are placed earlier than food materials

6 **Hospitality in Notation**

61 Strain on Hospitality

As stated in section 51 I spent about a month with SRR in Bangalore in preliminary work on the construction of an exhaustive schedule of materials and commodities He reminded me of his conjecture that the number of isolates in the schedule to be constructed would exceed 10^{10} This made us realise the enormous strain which this colossal number of isolates would put on the notational system

62 Hospitality of Colon Notation

Therefore we decided to explore in its entirety the hospitality of the notational system of Colon Classification Here, zone thinking led to "Sector Analysis' The 7 sectors recognised in the first three zones till then gave place to 25 sectors Confining ourselves to 3-digited notation, the number of possible isolate numbers was calculated to be of the order of 10^{14} as against the estimated need of 10^{10}. The originally recognised seven sectors yielded only 49,787 isolate numbers. The greater capacity of Colon Notation had not been realised until 10^{10} isolates claimed a place

63 Analogy of Pushpaka Vimana

This quality of the CC notation led SRR to draw an analogy from the epic

Ramayana. He described it as follows At the end of the war, Rama the hero started home along with his consort Sita and his brother Lakshmana Vibhishana, the brother and successor of the deceased antihero Ravana—offered to fly them to Ayodhya, Rama's capital, in his air vehicle, Pushpaka Vimana Rama felt concerned about the transport of his ally Sugriva and his army He wanted to take them also to Ayodhya He was wondering how that little air vehicle could accomodate all of them But on that very wish, the vehicle enlarged itself and provided the necessary number of additional seats As soon as it touched Kishkinda, the capital of Sugriva, on its way, Sita wished to take all the ladies of Kishkinda to Ayodhya On this very wish, the Pushpaka Vimana again enlarged itself and provided the necessary number of additional seats

7 Value of Depth Classification

71 COEXTENSIVE AND INDIVIDUALISING CLASS NUMBER

Classification was originally designed only for arranging on shelves macro-documents or conventional books About the turn of the present century, the International Institute of Bibliography in Brussels wished to use it also for classifying micro-documents or articles in periodicals SRR has been insisting that to make this possible, a scheme of classification should be capable of providing class numbers, which would individualise and be coextensive with any micro-thought however narrow its extension and however deep its intension Depth classification is the term used by him to denote such a scheme of classification While we were in the library of the Research Institute mentioned in section 4, he had to bring home to the minds of the documentalists and the research workers, the value of such a depth classification This he did with the narration of the following anecdote

72 DOCUMENTATION SERVICE DURING WORLD WAR II

On the eve of a turning point of World War II, the field librarian of South East Asia Command Head Quarters, based on the East Coast of Ceylon, was flown to India to collect data on the terrain communication, folkways of life etc of some of countries of South East Asia The first place she touched was Madras. She obtained from the Chief Secretary to the Government of Madras a confidential note to the University Librarian asking him to give all the necessary help. When the field Librarian arrived in the University Library, at 10 a m, she was asked to work in the librarian's room for security reasons Within the first hour of her arrival, the reference librarian wheeled into the librarian's room, three trolley-loads of books with flags inserted in most of the relevent pages. By 4-30 p m, she had extracted the necessary information. Then she said, "I had been allowed one month to visit the different libraries in India to collect the data. But I have got them all in less than six hours. My wonder is how all the relevent materials were assembled within an hour." She wanted to know the technique followed When the techniques of facet analysis and chain procedure were explained to her, she said that their American techniques would not achieve that result. She said that she was going to spring a surprise on the Head Quarters by delivering that very night all the data required

8 Conclusion

My colleagues in the library profession, who have been students of Dr S R Ranganathan all along, would have gathered many more anecdotes and analogies than myself I am jealous of them in this respect I wish they publish them. May God give our beloved Ranganathan many more happy returns of birthdays

CHAPTER S4

The Master Educationist

L S SHUKLA

0 Master Mind

MASTER minds do not appear in every generation. They come to shape history to create new ideas, new methods and new eras. I feel Dr Ranganathan is one of those rare souls. From zero we saw the Decimal Fraction Notation emerging out. From Decimal Fraction Notation we observed the Colon System; and today we get his new approach to classification finally filtered out in the form of 'Postulational approach' to book classification. Thus a new light has dawned and a new chapter begun in the history of library classification. Creation of new ideas is just a child's play for him and any one who has worked with him sincerely and intimately for some time is convinced about it.

01 DYNAMIC OUTLOOK

A man with a broad vision and an open mind, he never clings obstinately to any single idea or method. If something is unhelpful he will not rest until it is removed. The changes in the C C from its origin till today—all through the last 35 years—are examples of this. I have heard people commenting that a classification system which introduces changes in every edition is not fit for adoption. But these are people who had not realized by actual application the important features in these changes.

First of them are changes necessitated by the new formations in the universe of knowledge brought within the purview of classification from time to time.

Secondly the changes thus made to represent new formations are usually so made that they involve the least possible disturbance to existing class numbers.

02 SCIENTIFIC APPROACH

The value behind this is not seen by such people. His approach to classification or to any other branch of librarianship is not that of a lay man but that of a scientist. By practical application as and when he finds some rigidity, he plunges into its depth and tries to get a solution for it. The result is that while CC grows from strength to strength other classification schemes still ponder in darkness The first grammarian of classification, the Late Berwick Sayers has said at one place·

"If there was an age of Dewey surely there is an Age of Ranganathan."

1 Teaching Method

It is no surprise therefore that such a master-mind also looks to the teaching problems of his subject Brought up in ancient cultural traditions and at the same time having been educated in modern universities, he attempts to create symbiosis between the two. From the modern trends in thinking he takes up "Scientific Method" to develop any subject as well as teaching of Library Science But at the same time he does not want to copy what the British educational system had left to us as he is seeing it failing in every day education to-day He watches the bulk of the present generation getting bad to worse and so tries to pause for a moment, think, observe, experience and then proceed for the search of normative principles of 'Educational method'

2 Masterly Techniques

A man of 40 with own convictions and belief when I stepped down on the soil of Bangalore on the fine morning of May 18, 1961, I had only one idea in my mind that I am going to pick up something from the author of the Colon about him I thought he would be just like some of the good university professors When I go to him, he receives me with a smile on the lips, affection in look, and open arms to help the seeker that had gone to him The company that I had for about 6 weeks gave me so much to think, so much to assimilate, and so much to work upon that sometimes I fear I may not develop indigestion His company reminded me of another teacher in my life who also met me under similar conditions I was a zero in Mathematics at school but due to good fortune in my final year at the school, I had a good teacher. With the masterly technique of his teaching methods, he made me so familiar with the subject within 5 months—starting from addition, subtraction and multiplication etc to the toughest problems of Mathematics reaching to the matric level—that I could afford to across the border of 70% in that examination Any way I find that the methodology of the two was the same As it will not be possible to give full details of my reminiscense with him written within the boundaries of this article, I therefore state here in brief some of the techniques and underlying principles of education that I saw him adopting They have, with a background of about 40 years now become part and parcel of his life.

21 TEACHER-TAUGHT RELATIONSHIP

The first important feature in him, is his attempt to become familiar and intimate with the student within the shortest possible time He will not proceed with his actual teaching unless he had achieved this satisfactorily We have been talking so much about educational reforms that it is futile to stress the need of teacher-taught relationship here But I cannot help stating that Dr Ranganathan is just a living example of the real teacher-taught relationship From the first day to the last you will never feel that you are with some one who is high and far beyond your reach Rather within the very first week of your contact he gradually and gradually tries to help you in casting off your fears, reserves, complexes, and emotions completely so that you may be very frank, expressive and close to him Even if you commit some silly mistake, he will simply brush it aside in the beginning and correct it on some other opportune moment.

3 Art of Purposive Thinking

Secondly he gives more for the first few days and then applies a brake to it After this stage it is the taught that has to think, assimilate and place his doubts before him, if any This makes the taught think More and more purposive thinking is expected from the taught This not only helps the student, develop the art of purposive thinking but also gives the teacher an opportunity to know as to how much of the communicated material has been observed by the taught It also eliminates unnecessary repetition of ideas and missing of links in the thought pursued Here also if we observe the practice followed in our present day educational institution, we find the contrasts It is the teacher who is active but not the taught The teacher goes to the class, delivers a lecture or dictates some notes and gets away What has been delivered and to whom delivered does not seem to be their concern Teachers after teachers I have observed that they overlook the back bencher, the weak, the shy or the one suffering from inferiority complex But here according to him good boys are bound to follow or pick up what has been said or is to be picked up It is the weak personality who is to be pushed up If the weakest is pushed up, all other are also pushed up. The result is that while in our modern educational institutions the teachers go with their own speed dragging those who do not follow along with them, Dr Ranganathan wants to take every one with him He will wait, patiently look to the difficulties of the taught, explain him, ask him to repeat again and again until it becomes reflex action and then only proceed onward. At the same time he will also not let the other feel bored as he fills up this time with humorous anecdotes of his and others or with some mythological story bearing on the points being discussed

His attempt to put an idea right into the head of a person may really appear to be very taxing to so many teachers But this patience is very essential for a teacher if one wants his taughts develop, think and contribute to the literature they pursue. It is thinking that has created scholars, great men, scientists, philosophers, and what not The whole universe of knowledge is the creation of human thinking. But how to think ? How to develop thinking ? How to go on with purposive thinking on a given problem or idea in a given branch of human knowledge ? It is really this training that ought to be given at the college and university level It is this capacity that has to be developed in our students Once a student starts thinking on or about a subject, once he gets that training, once he picks up how to proceed with his thought and knows its furtherance through books by self-study the teacher's job is over. His job is to show the way, to clear the mist and not spoon feeding which is over doing or delivering lectures unmindful of the fact as to how much and by whom it has been followed or not followed.

Even in the midst of high flights at the philosophical planes of the subject, when the discussion is at its height, if a question of the lower order is put, he is never irritated. He immediately comes down to the level of the enquirer, answers his querry, and smilingly again flies up to the original level With a background of just a few hours and a little suggestive reading here and there he took me to the depth of the subject without creating the least feeling of heaviness in the atmosphere Designing a schedule for depth classification is the highest art of classificationists It is the masterly hand of Dr Ranganathan that alone can take one even to the deeper levels of design and depth classification without the least feeling of monotony, vacuumness in a person with no previous background

4 Concept of Polarization

Another beauty of his teaching method is the concept of polarity. In order to make the subject interesting and easy to understand he always takes two different things together to explain a given issue If you want to know open-access system you must also have the background and concept of closed access If you want to study legislation of a country you should also have by your side the legislative acts of other countries on the same subject, if not more than at least one other similarly If you want to study the advantages of lecture system you should also know other system of education, tutorial, discussion etc In order to experience pleasure you must experience pain This concept he calls principles of polarization The application of this principle is always seen in his books, wherever he proceeds with the study of given thought, idea, or subject But in his attempt to do so, he is always analytical and never critical I found him often saying rather complaining that people in order to give weightage to C C often condemn D C which according to him is absurd and foolish According to him D C's contribution is unique His decimal fraction notation is a gift to all future classifications. But it was designed to arrange books on the shelves It actually went a little further and the universe of knowledge in the time of Dewey was within the grips of D C while Colon is much later and is an improvement upon the D C with a different design and base to meet the new situations that faced it at the time of its inception It's latest contribution to the flexibilities at the notational plane is a challenge to the idea plane for the purposes of book classification Even the Colon of nineteen-thirties is far behind the Colon of nineteen-sixties A scheme has to grow keeping pace with the growth in the universe of knowledge.

41 RATIONAL APPROACH

Thus we observe that in all his teaching techniques he has a rational approach towards the subject of study He believes that a subject has to be studied from various angles and aspects in order to make one thorough in it Polarity is the key to this approach.

5 **Principle of Dr Tarde**

The last but not the least, rather the foremost of all is his application of the principle of Dr Tarde.

"Education—Imitation=0"

What I have felt is that he actually lives this expression Eating, walking, teaching, talking, discussing every step he wants to leave behind one or the other example Here again I am reminded of one spiritual teacher. The whole life of that spiritual teacher according to M M Pt Narayan Shastri the late ex-Librarian of Saraswati Bhavan Library of Varanasi was "Practice personified" He was known as a *Karma yogi* and used to utter minimum required expressions Every doubt could be just answered by simply looking to the every day routine and practices of this great spiritual teacher I have observed great Sanskrit scholars of repute coming to him with volley of questions in mind and going away without asking but feeling perfectly satisfied A close contact with him for a couple of days would just settle down the doubts of the persons coming to him

6 **Quality of a Teacher**

According to Dr Ranganathan a teacher has to so shape himself that by no action or expression within or outside the class room consciously or unconsciously he does or says anything wrong the imitation of which would be harmful to student He has to live with what he says or expresses For this he should be very cautious and free from emotions

7 **Dedicated Life**

Here also what are we to get from Dr Ranganathan if we apply the Principle —"Education—Imitation = 0".

We can imitate from his life an attitude to hard work, love for the subject, eagerness to know ideas and contributions of others, deep and continuous thinking over the problems that appear from time to time, humour, patience in listening to the difficulties of the students of the subject, open-mindedness and over and above all "*living with subject itself for all the* 24 *hours*". If our Government is really keen to do something serious for the development of education today, it must look to the whole life of this Master-Educationist and benefit by his mature advice which is always free to those who really want it and are earnest about it.

CHAPTER S5

Study of Dr Ranganathan as an Author and a Teacher

R L MITTAL

1 Works of Dr Ranganathan

DR S R RANGANATHAN who is a world famous figure as a writer is a specialist in Library Science. He rightly deserves the epithet "Father of Library Science in India" since he is an author par excellence. His writings are synthetico-analytical, inspiring and readable. It is a common feature amongst great writers that they create a problem for their readers by being erudite and by using a language difficult to decipher by an average person. But here we find quite a surprising situation since his books are not dreary and unreadable rather these are enjoyable just like fiction books writings are methodic and emanate from within and are not artificial. On the whole one can say with certainty that he has not made use of a pair of scissors for writing these famous books numbering more than fifty.

11 STYLE

Another important feature of his writings is that these are embellished with life-like, real and befitting examples and anecdotes which play a very important role in making these technical books as interesting as light literature and his fundamental book *Five laws of library science* sheds a flood of light just like fire meters. The whole of the philosophy of librarianship has been presented through these Panch sheelȧs of Library Science which are on their own part so pregnant with meanings that if one tries to unfold these one by one, volumes can be written for each one of these fundamental principles. His exposition and expression is so masterly that the reader is spell-bound and he dares not to leave the book unfinished.

12 DEPTH

His insight into the subject is so perfect and piercing that even if he puts a few lines, he properly classifies the matter in such a manner that a layman is forced to pause and ponder over the analytical mind of this beloved son of our motherland

2 Self Sacrificing Soul

Dr Ranganathan is a selfless and zealous worker in his field which can be easily gauged through his chequered career which is nothing but the anecdotes of his sacrifices and hard labour He has donated his life's earnings to the Madras University Library in the cause of Library Science for the establishment of a Chair in Library Science for facilitating further research in Library Science

3 Influence

He does not confine to himself alone this talent of writing but he inspires others who either come into his contact or who happen to read his books. His approach and methods of writing is so methodic and appealing that a reader gets infected and is turned into a writer in no time Those who come into his contact are fortunate but those who have a chance of living near him are the luckiest There is no dearth of examples of those who know him and those who have been his associates can cite scores of such inspiring examples without any difficulty He is just like a lamp post which gives light to other lamps with its flame He is a meteor which leaves a trail of light for others to wonder and ponder and to follow him blindly

4 A Genius

He is a genius with exalted intellectual power He possesses a sense of dignity of labour He is not only intelligent but to put a premium upon it, he is one of the most industrious library workers He, in fact, knows the value of time and does not waste even a single minute in unnecessary pursuits but rather, on the other hand, he spends most of his time in literary pursuits His books are received in the market with much enthusiasm throughout the world and become instrumental in furthering research into the unseen blind alleys The co-authors M/s B I Palmer and A J Wells, the writers of fame, have acknowledged their gratitude to Dr Ranganathan by dedicating their book *Fundamentals of library classification* in the following words "to the second (Dr Ranganathan) *because he has shown us a way forward.*" They further acknowledge in the preface of the said book by admitting that "this work is largely founded on Dr Ranganathan's researches". Dr Ranganathan's contribution as a writer is lasting and unparalleled in the history if we just care to go a bit deep into his philosophy of library classification depicted in his novel and standard scheme known as "Colon Classification" which is fitted with so many enviable devices of making the class numbers synonymous with the subject matter which no scheme of classification can boast to do. These devices are being studied with much interest in the library world and are being much used at present.

5 Humble in Greatness

He does not possess the much denounced ego in him so far as his writings are concerned since he consults all experts in the special subjects before he tries to arrive at a certain conclusion This can be seen by his development of various schedules of classification as published in various library periodicals reporting the outcome of various conferences. He encourages the young librarians to write something in order to be self-sufficient to some extent so far as essential text books in library science are concerned.

51 Creative Work

His books are self-styled witnesses of his originality and understanding His study of library science is not lop sided but he has filled up the gaps by writing books on all conceivable topics of library science His fifty books and scores of articles are a source of strength to the Indian library profession and to the world librarians as a whole

6 Intense Love for Knowledge

Dr Ranganathan's works are based on his thorough study and rich experience which he gained through foreign tours This is evident from the theme of his books in which he has clearly brought out the philosophy of librarianship i e the rendering of library service with a motto—Love of knowledge and love of humanity—are the two wheels of a chariot without any of which the journey cannot be completed

7 Unique Teaching Methods

The second facet of Dr Ranganathan's personality can be seen in his teaching capacity and methodology Those lucky persons who have been his students (I can consider myself as one of them) know the enchanting personality of Dr Ranganathan Again, a student realizes the importance of his teacher only when he himself is entrusted with the enviable and onerous job of teaching the students

The first quality of a teacher, which is very essential should be the knowledge of the source material because unless he himself knows the availability of relevant material, neither he can know himself the topic fully nor can he guide the students properly Ranganathan is a living example He goes deep into the sources and makes it public to the students well in advance He tries to dig deep into the material available in books, periodicals and other kindred materials

The second quality of a teacher is the ability to scan the material with a searching eye in order to separate the wheat and the chaff He should be able to know the truth and the untruth of a thing since the amount of chaff is found in larger quantity than that of wheat. Dr Ranganathan has the habit of scanning the heap of relevant material with no difficulty He guides the students to study the specific paragraphs and pages only of a book or a periodical because otherwise it is very difficult to get at the requisite material in a labyrinth of reading material

The third quality of a teacher is the sincerity of purpose with which he should work for the students. He should do full justice to the job by having mastery over his subject Dr Ranganathan is unequalled in this respect.

The teacher is expected to have clarity of thought otherwise he will be doing injustice to him, to the students and to his subject of study Dr Ranganathan is so clear in his thought that the students who have once heard him in the class can never forget the topic and can express themselves verbatim Another essential quality of a teacher is his scholarly bent of mind. He should try to understand the subject fully by going into the 'What', 'Why' and 'How' of the topic. Dr Ranganathan's teaching is nothing but the scholarship personified

The great quality of a teacher is that he should try to be a student himself In other words, he should continue his search for the truth and he should try to learn something from his students Dr Ranganathan is always a student since he knows that a man cannot be a master of any subject as it is quite impossible for a man to grasp the unending and ever-increasing ramifications of a subject.

The teacher when he is infested with the 'ego' does not remain a teacher because this characteristic is quite foreign to the teaching profession. The teacher should be humble and should not dismiss cursorily the views of his students Dr Ranganathan is as humble and sympathetic as one should be He, on the other hand, encourages the students to cross-question him

The teacher who hides anything from his students is a slur upon the profession Only weak and incompetent teachers try to hide the sources from which they prepare their lessons Dr Ranganathan, not to speak of hiding anything from his students, unravels the unknown sources and feels himself proud if his students can discuss the subject with him on equal footing With this end in view, he announces in the class the topic to be discussed later along with the possible sources of study

Lastly, the teacher should not try to force his views upon the students rather he should be able to take something out of the students by tactful and able methods There should not be any sort of spoon feeding but the teaching should be objective as far as possible.

In short, Dr Ranganathan can be ranked as one of the top ranking authors and teachers of India, nay that of the world

CHAPTER S6

Dr Ranganathan as a Teacher of Library Science

B GUHA

1 Introduction

DR RANGANATHAN was giving a lecture, in the course of one of his lecture-cum-teaching tours, before the students and members of the faculty of library science of a well-known university in the United States. After finishing the lecture he invited questions with a view to amplify further any idea(s) which might have sparked the imagination of the students. Immediately a girl student stood up and hurled, quite unexpectedly, "Why is teaching of library science here not made as interesting as Dr Ranganathan has made it?" The Dean of the Faculty humorously said "I shall have to answer that question and not Dr Ranganathan."

That was how an American student reacted to Dr Ranganathan's way of teaching and, I am sure, she must have voiced the feelings of many of her colleagues. His way of approach to any topic in library science is so different from all conventional mode of teaching that it cannot escape notice. One is bound to sense that there is something new in his approach which makes him so interesting in the class room. At first one may think that he has a good flair in teaching. But as a regular student of Dr Ranganathan I can say, as his other students will also say, that undoubtedly he has a flair in teaching, but it is something more than the flair, some well thought out principles in teaching which make all the difference.

2 Teaching in Classes of Bibliography

I remember that at times his lectures were so thrilling that we could not help but discussing amongst ourselves the class room proceedings even after the class was over. I remember vividly about one such class when we were taught about various classes or types of bibliographies. Usually, students are confronted with such confusing terms like—systematic bibliography, enumerative bibliography, historical bibliography, descriptive bibliography, topical bibliography, reference bibliography, critical bibliography etc. In usual teaching practice a definition is provided for each of these terms and students asked to remember them A student in his turn has no other alternative but to invoke the help of rote memory to retain them at least for some time. In fact these terms are so loosely coined that there cannot be any logical or mutually exclusive definitions for them. But we were introduced to this topic in a novel way. We were asked to consider books as economic commodities Bibliographies then naturally meant catalogues of the commodities, known as books, prepared from the special point of view of the various parties acting as the producers, the distributors and the consumers of the commodities Now, as for the parties involved in the economic chain, we could easily recognise such parties as the authors, publishers, booksellers and readers and fix their respective roles. But, surely the librarians also had a part to play in this economico-bibliographical activity. It was decided that their role could not be anything other than that of distributor. If that was so then what was the difference between a publisher and a librarian, as both of them were distributors They were undoubtedly two distinct agencies, but what was the subtle difference in their role of distribution that gives this distinctiveness ? Here our teacher introduced us to another concept about books. Books were double entities, as they were records of thoughts embodied in tangible bodies Some people had to care and handle books as material commodities Their functions were the production and distribution of books as material commodities There were others who had to care and handle for them and find satisfaction in them mainly as embodied thoughts They were the producers, distributors and consumers of the thought-contents embodied in books With this analysis the difference in the role of booksellers and librarians became quite clear Booksellers were interested in the distribution of books as material commodities While the librarians' function were to help in the distribution of the thought-contents in books In the same way, books being double entities, we could also recognise parties like printers and binders as producers of books as material commodities

21 THE ECONOMIC-BIBLIOGRAPHICAL CHAIN

One student was now asked to put on the black board the findings of our analysis, so far, in a diagrammatic form. By further discussion and by dressing up a little our findings, already obtained, we could produce the following diagrammatic representation which had been termed as the 'economico-bibliographical chain'[1]

In the above representation some agencies were deliberately put as junction links between the phases It was found out that each of them played a double role. As for example, the publisher played a double role. He was at once a producer and a distributor.

This cooperative exercise in the isolation of all the possible agencies responsible for the preparation of bibliographies and this basic probe into the field of study prepared us to go further into the field without any difficulty

Economic role	*Agencies*	*Classes of bibliographies*
1 Consumer	11 Readers	Reading lists,
	12 Authors	Authors' bibliographies,
2 Distributors (Thought)	21 Reference librarians	Subject bibliographies,
	22 Library cataloguers	Library Catalogues,
	23 Book-selection agencies	Book-selection lists,
	31 Bibliophiles	Bibliophilic Bibliographies,
3 Distributors (Material)	32 Booksellers	Booksellers' catalogues,
	33 Publishers	Publishers' catalogues,
4 Producers (Material)	41 Governments (copy right authorities)	Copyright lists,
	42 Binders	Binders' bibliographies,
	43 Printers	Printers' bibliographies and
5 Producers (Thought)	5 Authors	Author bibliographies

3 Co-operative Thinking in the Class

In my effort to recapitulate one typical class room lecture, I think, I have made it evident that we—the students, had the main part to play in reasoning out every detail and every step in procedure The teacher acted as a guide to help us proceed along right lines This active part in the proceedings of the classes gave us both a sense of joy and pride We could also feel that our teacher was guiding us with some well thought-out principles We could vaguely sense these principles though we were conscious of their beneficial effects on us Years later, Dr Ranganathan had himself laid down some of those principles in writing[2] Now it is possible for us to correlate the principles involved and their effects on us as students

4 Teaching Technique

It would be only in the fitness of things if a few principles or the methodology of teaching is also discussed here in support of the actual approach in teaching as revealed in the above example As library science is mainly taught as a post-graduate subject and is intended to be taught to adolescents and adults, the teaching technique cannot merely consist of 'telling facts' On the other hand, it should, largely consist of reasoning out every details So that rational memory is allowed to be developed in the students Even when facts are to be given, they should be given as inevitable conclusions of some reasons The technique sounds quite simple and obvious Yet, in practice, in the teaching of social sciences this technique is yet to be applied Teaching, in most of the social sciences is still at the level of 'telling facts'. They are to be rescued from this rut. As library science is predominantly a social science, telling of facts has been dominating in its teaching technique

41 FORMULATION OF NORMATIVE PRINCIPLES

Now, the question arises as to what may be the cause which hinders the lifting methodology from the technique of "telling facts" to that of "reasoning and inference" in the social sciences, particularly in the field of library science. A study of this problem has revealed that the teaching of a subject by the method of "reasoning and inference" is possible only when certain normative principles or laws of science have been established in the subject These normative principles are got by a systematic and purposeful study of all the accumulated facts in a subject. The normative principles should contain latently in themselves all the facts and techniques to be told In other words the normative principles should be able to explain all the phenomena in the field of study But to make these established normative principles disclose all their implications 'an efficient calculus'—a calculus of reasoning and inference is required The calculus used for reasoning and inference in the social sciences are still in a developing stage

42 FIVE LAWS IN THE TEACHING OF LIBRARY SCIENCE

In the field of library science a set of normative principles has already been formulated which can be used as the starting point and anvil on which the subject can be beaten to get it developed I refer to the Five Laws of Library Science A general account of these normative principles and their implications in some branches of library science has been given in the *Preface to library science*[3]. I can recapitulate many instances in our class room discussions when the help of these laws were invoked to resolve various difficulties I may mention here that the subject of lecture (mentioned in the 'Introduction') was an exposition of the development of libraries in India as revealed by the action of the Five Laws

5 Teaching of Physical Bibliography

As a most successful area of application of these laws, the field of physical bibliography may be mentioned I mention this field particularly, because possibly in the entire curriculum of library science this branch is most loosely associated with the main subject of study So much so, that in most cases paper-making, printing, and binding—which constitute physical bibliography—are still taught as independent crafts, with little correlation to the library profession. There is instances when students have cast their doubts about the suitability of including these topics in the curriculum of library science, even after studying the subject Obviously, they were taught in such a way that they had only to cram some definitions and descriptions. However little knowledge was possible to impart through this method soon became stagnant. This happens mainly because in the teaching method of physical bibliography, the subject is not effectively correlated to the main subject of library science Dr Ranganathan has been able not only to forge this correct correlation in the teaching of physical bibliography but he has completely reoriented the subject This correlation and reorientation have been effected by the application of the Five Laws of Library Science

51 Application of the Five Laws

I still remember with delight the way each law and each word in a law was coaxed one by one in the class room to give out its secrets I may mention that this new approach was in the formative stage We had no access to any reading material treating the subject with this new approach As a result each day's lecture was as thrilling as fresh adventures We felt completely at home with the subject because the subject was being reoriented from the librarian's point of view. I need not recapitulate any of the actual lectures as they have been brought out in the form of a book[4] Even a cursory glance into the pages of this book will reveal that all the branches of physical bibliography have manifested themselves as logical implications of the Five Laws or every new developments in any branches could be explained by the Five Laws I have mentioned earlier about the problem of stagnation of knowledge as a consequence of teaching by the older method To drive this point home I should give an example here In the older teaching method physical bibliography largely consisted of imparting a knowledge in paper-making, printing and binding This was because the physique of a conventional book consisted of paper on which the language was printed and these printed sheets were bound together in the form of a book This method has not yet been able to recognise the significance of the advent of books in micro forms (i e microfilm, microcard, microfiche etc) on the study of physical bibliography It is difficult for a student taught by this method, to correlate this phenomenon with his knowledge of physical bibliography But for a student taught by the new teaching method where the Five Laws have been taken as the starting point in teaching, this becomes a comparatively easier task

52 Advent of Books in Microform

In the new method of teaching the developments and the changes in the embodiment of books—from book on stone through book on leaves and book on barks to printed book on paper—are clearly depicted as the consequences of the persistent operation of the Fifth Law (Library is a growing organism) With this knowledge a student cannot fail to see that the latest embodiment of books, in microform, is also a change in the same direction. A change hastened by the insistance of the Fifth Law. If that is so, are librarians to extend their full support to a wider use of books in microform, if not, which are the fields where their use may be profitable and why ? These are some of the usual points on which a librarian has often to take decisions regarding books in microform. Again, these questions can be answered correctly if the help of the Five Laws are invoked It can be easily realised that nothing can flout the Fifth Law more effectively as the reduction of all books and kindred materials into microform It will demand such a reduction. But the other Laws have also something to say in the matter The success of the printed book on paper as the most acceptable form of book has been mainly due to the support of all the first four Laws But the change-over from this accepted form to the microform will, at least meet the opposition of the Second and the Third Laws This is because a book in microform is not directly readable There is the existing hurdle of getting a magnification or procuring a reading apparatus So, in an ordinary library, where efforts have to be made to make books acceptable to the ordinary man, no current book or kindred material should be reduced to micro forms So we have to find a compromise with the Fifth Law. By coaxing the Laws it can be found that there are purposes where books in microform can be used with the support of the Second, the Third, and also the Fourth Laws Books which are very rarely used but have to be preserved, rare books for which there are demand, books whose paper is perishing and similar other books can profitably be reduced to microform This will extend the life of the original books as readers will use mainly their microform In special libraries books in microform can be more extensively used This is mainly because the interest of the readers here are so intense that they can easily overcome the hurdles of magnification or reading through an apparatus In effect it opens up the possibility of unrestricted extension of inter-library cooperation, as a micro-copy of any reading material can be easily transhipped to any part of the world without the risk and inconvenience—at times impossible—of transhipment of bulky volumes This also saves time as a microcopy can be easily sent by air So here is a field where a special librarian should try to extend the use of microform more and more

In the above paragraphs I have tried to show that though library science is predominantly a social science yet Dr Ranganathan has shown that its teaching method can be raised from the level of "telling of facts" to the level of "reasoning and inference" if judicious use is made of the Five Laws as the normative principles

6 The Future

In India about twelve universities are at present imparting training in library science as a post-graduate subject In some of the universities full-time teachers have also been appointed. The old system of making the university librarian and the senior members of his staff to teach the subject has been discarded. For the first time, in India, we have a few men whose exclusive profession it is to teach library science. So it can be legitimately hoped that some time and energy would be spent for the improvement in teaching method. The path already shown by Dr Ranganathan may help them in finding an improved method and technique of teaching library science.

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CHAPTER S7

Dr Ranganathan as I understand him

SANTOSH M SOHLA

1 Light in Darkness

IN the words of the *Gita* if I say that Dr Ranganathan is a man या निशा सर्वभूतांना तस्या जागर्तिसंयमी "when it is night for every one, the self-controlled one keeps awake," it is without exaggeration. He awoke at such a time when our country was struggling for democratic rights and independence. He was fully aware of the pre-requisite of democracy, i e literacy and advancement in knowledge in every walk of life. At the same time, he was also aware of the need of well organised libraries and a well organised system of library service in the country. He started writing from 1930 onward in this subject when every one else was unaware of the future need of our democratic country. Again, feeling the nerve of the time after Independence, he wrote his *Library development plan* in 1950, which explains a well planned library system for India and its constituent States. Nobody can deny that a well organized library is a treasure-house of knowledge and library is the only institution which provides perpetual self-education. Now our National Government feels the necessity of having a planned library service throughout the country, for which Dr Ranganathan had already shown a path. He has also written 'Library Development Plans' for a number of individual States at their requests.

2 Personal Contact

I came in close contact with Dr Ranganathan about eight years back when luckily I became his student at the University of Delhi in 1954-55. He was to retire in the same year. As I had already been aspiring to become his student, I availed of the full opportunity, of course, within the capacity of my talents and strength, in learning the subject from him; in observing his teaching method; and above all in studying in him the qualities of a truly great man.

3 Teaching Method

His method of teaching is excellent. He takes the subject of Library Science in a practical way. He does not simply deliver a lecture in the class and go away He encourages every brain in the class to exercise itself He introduces the topic and puts the problem before the class to think and answer there and then That is why everybody in the class had to be alert to think quickly and give one's contribution in the discussion of that topic The contributions of all and reshaping it in the end by himself, would produce an excellent and original answer to the question Then he will give the guidance for future reading for the topic For homework, he used to ask the time taken for writing the answer of a question and the reading material consulted

4 Personal Experience

Now, when I got a chance to teach the students of library science myself, I made the experiments in both the ways, i e by lecture method and the practical method, as I name Dr Ranganathan's teaching method It has been proved that the students become more energetic and enthusiastic while following the latter method A life is felt in the class The atmosphere of class becomes so homely that even the back-benchers come out of their shyness The same atmosphere I used to feel in the class of Dr Ranganathan Sometimes he used to call the class at his residence. We used to sit in the lawn under the shade of trees and enjoy a 'Gurukul' or a 'Shanti Niketan' atmosphere The willing students were happily allowed to work in the extra hours with him to learn preparing sometimes a bibliography or on some other project taken by him.

5 A Karma Yogi

Today it is an open secret that Dr Ranganathan and Library Science have become one He thinks in Library Science, he speaks in Library Science and he sleeps in the lap of Library Science He has written more than fifty books, touching every possible practical or theoretical problem, and a very large number of articles Similarly, he has delivered a countless number of lectures on the subject He attains unending happiness as his body, mind and soul have been concentrated at one goal He is not less than a *Yogi* The *Gita* defines *Yogi* बाह्यस्पशेष्वसक्तात्मा विन्दत्यात्मनि यत्सुखम। स ब्रह्मपोगयुक्ततमा सुखमक्षय्यमप्तुते "to external objects unattached, who hath his joy within the soul, whose soul is fixed in Brahma Yogi He gains unending happiness " If we observe his way of life, he spends the minimum for his personal requirements and he is unattached to the wordly show He spends every wakeful moment either in discussing or in thinking or in writing about Library Science The source of his abiding strength, even at this age of 71 is the unending joy he gains within the soul fixed in the *Yoga* of his subject

6 A Great Man

He is truly a great man. A great scholar suggests three tests to judge a great man Firstly, his ideas, or his actions or both should have a powerful or beneficent effect in changing the course of history. Secondly, he shouldn't merely understand the world around him better than his contemporaries but he should also have a foresight about the way his world is moving. Thirdly, he should show himself faithful to his inspiration with courage and endurance.

Who can challenge that Dr Ranganathan hasn't changed the course of history of Library World in India as well as given new thoughts to the world around ? He sensed the vein of the country about two decades ahead and started producing literature in a subject which has gained its recognition only recently. He has been facing opposition too with great courage Still he has been faithful to his inspiration I think those who have spent even a few hours with Dr Ranganathan know fully that he is a man whose honesty of purpose is extremely transparent

CHAPTER S8

Effect of Colon Classification on the Teachings of Classification in American Library Schools

THELMA EATON

1 Infiltration of Colon Classification

THE *Colon Classification* of S R Ranganathan, which has completed its first quarter of a century, has taken its place with the major classification schemes now used for the grouping of books on shelves or entries for those books in catalogues. To measure the impact of this classification scheme on libraries and librarians in any scientific manner is clearly impossible because much of its influence is the result of a subtle infiltrating of the philosophy which governs it. Things on this nature cannot be measured by results assembled from a questionnaire study, nor from the presentation of a series of statistical tables. And, in some instances, the people who have been influenced by a study of the scheme are unable to tell just what they have gained from this scheme.

2 Preference of Existing Schemes

In many parts of the world the development of classification schemes to be used in arranging the titles of books has been a kind of mental exercise carried on by scholarly individuals who have read extensively in the work of the earlier philosophers. As a result a variety of independent schemes, all useful in their particular settings, have been designed. In the United States the library training agencies have placed their emphasis to fit the needs of an individual library. It is true that two of the largest libraries in the country, those of Harvard University and Yale University, do use schemes which have grown up with their book collections, but the greater number of libraries accept one of the established classification schemes, making adaptations to serve local needs.

3 Reason for Adoption of Decimal Classification

This somewhat regimented approach to classification is due, no doubt, to the force exerted by Melvil Dewey who saw as the ideal of books classification the use of a single scheme that would be used in all libraries in the United States. He felt that the Utopian state would be achieved when a patron who knew where to find a book in the library that he customarily used would be able to proceed to the same selection of shelving in a library in some distant city and find the same book, all neatly marked with symbols identical with those used in all other libraries When Mr Dewey established the first library school at Columbia College (later Columbia University) in 1887, he taught his students to use his *Decimal classification* for arranging books and other materials The library schools that were established in the years that followed adopted a good ideal of the pattern of the first school Since these early training agencies were concerned primarily with sending out librarians who could go directly into library situations and carry on with the work of organizing the collection there was considerable emphasis on techniques and even on clerical routines In the earliest training programs there was too little time to master both the theory and existing schemes The emphasis, of necessity, was placed on the practical and the practice was usually given in *Decimal classification* Some schools did teach Cutter's *Expansive classification* and students from those schools spread that classification throughout certain parts of the country It still survives in a limited number of libraries Probably the *Expansive classification* would have been taught more widely and used more widely except for the fact that Mr Cutter died in 1903 and there was no assurance that his scheme would be kept up to date

31 THEORETICAL STUDY OF OTHER SCHEMES

As the years passed the library schools established longer programs which provided more time for the discussion of classification and more time for a study of newer developments in the field When the Brussels Institute enlarged the Dewey outline discussion of this scheme became a regular part of course work Students were supposed to know why the scheme was developed and how it differed from its parent As the various schedules of the Library of Congress Classification were prepared they, too, became a subject of discussion. The main classes of the Library of Congress scheme were considered and the organization of the scheme was compared with that of the *Decimal classification* It will be noted that schemes other than the established schemes by Dewey and Cutter were talked about but no practice was given in their use In a country where more than 90% of the libraries, public and academic, used the *Decimal classification* it seemed reasonable to prepare future librarians to use that scheme effectively The few people who found themselves in libraries which did not use these schemes would have to familiarize themselves with the scheme after they began work

4 Colon Classification in U S A

Since it appears that library schools in the past have dominated the approach to classification in the United States it seemed that it might be possible to earn something of the impact of *Colon classification* on American libraries by asking the library schools about their methods of presenting the scheme in their course Instead of a questionnaire, letters were sent to the teachers of cataloging and classification in the accredited library schools in the United States and Canada Teachers were asked if they had their classes study on *Colon classification* and if they felt that their own approach to classification had changed as a result of their own study of the principles advanced by Ranganathan Obviously the answers to such questions cannot be placed in neat categories, but some generalizations can be drawn from the information provided by the teachers, representing twenty-seven of the thirty-one schools, who did reply

5 Impact of Ranganathan's Ideas

A number of teachers indicated that they felt that the time available for the teaching of classification was too limited to undertake a study of any classifications other than the two which were most likely to be used in the libraries to which graduates would go i e the *Decimal classification* and *Library of Congress classification* Consequently the amount of attention that could be given to any study of classification other than the practical seems to depend on the number of courses offered by a school, the number of courses required and the number of elective courses available Required courses in cataloguing and classification vary in number, but it must be remembered that the courses combine cataloging and classification in a single integrated course, or include the whole area of technical services in one course It is true that a few schools offer advanced courses which are limited to classification but this is the exception rather than the rule Required courses, in cataloguing and classification combined, range from a single course offered a prior to the graduate programs (Illinois) to the two graduate courses which are required in a number of schools However, some schools which require two courses offer nothing beyond the two required courses Illinois, on the other hand offers a total of five courses in cataloguing and classification, four graduate courses in addition to the one required undergraduate course Emphasis on a broad approach to theory and practice in classification is most common in schools which offer a strong elective program in this field. Schools which offer a limited program are likely to spend little or no time on anything other than the two schemes which are most commonly used in American Libraries One teacher expressed this policy when she wrote, "We require only one semester of classification and cataloguing at the graduate level and offer only one elective course This does not provide much opportunity to present classification schemes other than those which the students will need in the library in their work " Beginning courses may mention the *Colon classification* as an existing scheme but there is little time for anything beyond that Any serious study of classification theory or classification schemes other than Dewey and Library of Congress will be delayed until a second or third term.

6 Teaching of Colon Classification

It is always difficult to explain how courses are taught because each person who hears an explanation interprets the words in relation to the meaning he gives them but it would appear that the approach to *Colon classification* is through lectures, readings and student report. Those teachers who mentioned time stated that lectures of from two to four hours duration were devoted to *Colon Classification* In other courses where the teacher talks informally, in a manner that cannot be called a lecture, it is impossible to state any time devoted to this scheme, or any other scheme Discussion is based on topics and *Colon Classification* or *Bibliographic Classification* will be mentioned when they illustrate the topic under discussion Readings are taken from current journals and from books by Ranganathan, Sayers, Philip, etc Students' reports are sometimes based on the scheme itself, sometimes on articles written about the scheme and sometimes on other works of Dr Ranganathan In almost every case the emphasis is on the theory of classification and on Ranganathan's approach to classification theory Only two teachers stated that they attempted to classify books according to this scheme Two teachers stated that they had their students compare Dewey, Library of Congress, Cutter, Bliss and Colon In some schools which do not include the *Colon Classification* in the outline of work for any course there is a special course of the seminar type, in which it is possible for a student to devote his special study to the *Colon Classification*

7 Acceptance of the Principle of C C

The question as to the effect the knlwledge of *Colon Classification* has exerted on the teacher's attitude towards classification is not an easy one to answer The subtle infiltrating of a belief or point of view which was mentioned at the beginning of this paper applies to teachers as well as to students Any teacher who prepares a lecture to present to his class has increased his own knowledge and subjected himself to the forces of the scheme The graduate may feel that he knows little or nothing about the *Colon Classification* but it is possible that in classifying according to Dewey he may find himself analyzing his book according to principles which were explained in his library school classroom in connection with Colon Many of the teachers stated that they felt that their own teaching had not been effected in any way For some that is probably true Those teachers who emphasise the laboratory method with emphasis on the actual classing of books probably do concentrate on the two schemes most commonly used in America and give relatively little attention to other approaches But most of the replies indicated considerable knowledge of the scheme If the teachers have this considerable body of knowledge it is probable that the knowledge is being used in their teaching, whether or not they are consciously discussing *Colon Classification* The teacher who said " everything I study in this area helps me and tends to change my approach somewhat" was probably speaking for all teachers.

8 Torch-Bearer in Classification

In conclusion then we may say that although no library school is attempting to train people who are ready to leave the school to take over the work of classifying books by means of *Colon Classification* and apparently no library school is urging the adoption of this scheme in American libraries, most students will come briefly under the influence of Dr Ranganathan His contribution to the whole field of classification has been far reaching and the students of today may get an inspiration from his work that will guide them to further discoveries in classification Dr Ranganathan has been a force that cannot be ignored and from the study of his works some revival in interest in classification may be expected in the United States

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2 Replies were received from McGill and Pratt after this paper had been despatched to India No replies were received from Drexel and Washington

CHAPTER S9

Ranganathan—the Teacher

ANECDOTE

S B VAJPAYEE

DR RANGANATHAN was addressing the first batch of the students of the Certificate Course in Library Science at The Government Central Library, Gwalior in March, 1958. I was also one of them. He was conversing with the students very freely by putting questions and getting their answers. When my turn came, he put this question to me:

"Whom will you approach for your difficulties in your school studies?"

I hurriedly and hesitatingly gave out, "My father."

Dr Ranganathan smiled and remarked, "No, you shall not run to your father from your school but shall go to the Library and the Librarian." He further elaborated "For a Library is a service place and the Librarian, a teacher of teachers."

These words of the 'Father of Library Science' are always ringing in my ears and constantly remind me of the supreme duty of a Librarian.

PART T

EVALUATION (WORKS)

CHAPTER T1

A Problem in Communication

BERNARD I PALMER

0 Communication of Creative Ideas

THERE are two major considerations conditioning the degree to which an original and creative thinker can communicate his ideas. One derives from the relationship of his thought to the general level of thought of the workers in his field: how revolutionary is it, in fact ? The other arises from his possession or non-possession of a language suitable for its transmission: a man may be born out of his place as well as out of his time. The communication of the fundamentally new work of Dr Ranganathan in classification has, to some extent, suffered on both counts, partly because it is so much in advance of anything previously done that at first sight it appeared to have no connections with earlier work, and partly because he has had perforce to communicate in a language which is not his own.

01 RESENTMENT TO NEW IDEAS

The difficulties of communication arising from the nature of the subject as seen by Dr Ranganathan are partly due to a change in the materials exploited by librarians over the past half-century and the need for more exact tools to cope with them. There is probably a natural resistance on the part of most librarians (certainly those who reached maturity in the nineteen thirties) to mathematical modes of thought, and classification as expounded by Ranganathan uses these modes. The attractions of pure literature have always been a big factor in the recruitment of librarians, and it was the literary man rather than the scientist who entered the profession in the past. But social evolution is no respecter of persons, and the increasing emphasis on science and technology in published literature is reflected in the materials collected by libraries, and new techniques must arise to deal with the output of new kinds of literature. Dr Ranganathan has never tired of drawing our attention to this; but the older we get, the more we hope to be able to manage somehow with the tools we know, and not to have to learn the use of new ones. This resentment of change is the cause of many rearguard actions by those who will not learn.

1 Efficiency of Colon Techniques

To my generation of librarians, raised on the enumerative type of classification (though indoctrinated by Sayers with the ideas of logical analysis, which somehow found so little reflection in D C) Ranganathan's ideas of *Facet Analysis, Synthesis* and *Seminal Mnemonics* came as a shock. It appeared to us that we must unlearn all our painfully acquired knowledge of classification A superficial study of Colon Classification and what might be called the Colon technique, made us realise that the useful "unity" which the widespread adoption of D C provided had to be forsaken if we were to meet the needs of the times and specify more closely the subjects coming to our notice That this "unity" overlooked, the more specialised libraries, whose needs D C could never meet, was itself overlooked Indeed, Colon Classification as the prototype of the fully analytico-synthetic scheme seemed to offer us little more than a selection of symbols and a book of rules for using them (the Meccano idea which its author so often cites), and to us was left the job of number building for each subject What we could not guess until we tried out the scheme was that individual users would arrive at the same number for the same subject, if they obeyed the rules This is certainly not necessarily true of D C once we get away from simpler subjects The great gain from colon technique, which is only realised from an adequate study of it, is that the "unity" which is induced by it occurs at a deeper and more satisfying level. On the surface, it produces a diversity that matches the diversity of libraries serving different ends

11 ANALYTICO-SYNTHETIC APPROACH

The use of classification not only as a method of arranging library materials or records of them, but also as an instrument for reader service becomes a greater possibility with the analytico-synthetic approach of the Colon technique[1] However, the technique is even more fundamentally valuable and satisfying than that It offers an instrument for apprehending knowledge itself, without reference to books or catalogues, readers or libraries It gives one a sense of control of knowledge (even of knowledge one has not previously encountered) because it offers, as it were, intellectual handles by which to grasp it No attempt will be made here to discuss [P] [M] [E] [S] [T], as it has been more fully considered elsewhere[2], but it is just this formula which provides the power of control I have no hesitation in saying that it is the common experience of those who have assimilated this basic idea of the fundamental categories expounded by Ranganathan that their whole understanding of the world of knowledge has thereby been enhanced They find themselves able to communicate more effectively with subject specialists, whether of the sciences or the arts, and are never at a total loss when confronted with a piece of "new" information in a field of endeavour hitherto unknown to them. Dr Ranganathan's categories appear to be related to the very stuff of human thought and activity.

2 Ranganathan at Work in Britain

It seems a far cry from Ranganathan's theorising, which requires in its higher levels a meta-language to ensure precision and clarity, to the ordinary day to day work of the librarian. Some of his research papers, and (even more) his informal impromptu "seminars" whenever and wherever a few colleagues show interest in an advanced problem, seem very remote. The uncomprehending listener to one of the latter might wonder whether Ranganathan's feet ever touch the ground But all this theory is based on empirical observation and is tested at every point against the realities of information storage and retrieval: all this abstraction issues ultimately in very concrete form For what could be more concrete than the *British national bibliography* as its issues, cumulations and annual volumes thump on to the librarian's desk, or are eagerly scanned by readers the world over ? Yet the prompt appearance and unconflicting classification of BNB (based though it is on D C) is *owed* to Colon technique[3]. An even more direct offspring is the classification scheme devised by E Coates for the *British catalogue of music*[4] This is completely analytico-synthetic, and might almost have been the work of Ranganathan himself Dr Ranganathan has evidently successfully communicated his ideas (however advanced they seemed up to ten years ago) to one group of practical workers in Britain One cannot therefore point to the difficulty of the ideas themselves as being an insuperable barrier to their wider and more rapid dissemination

3 Master-Communicator of Ideas

Can the barrier be partly one of language ? Dr Ranganathan writes and speaks English fluently and idiomatically, but the idiom is not always that current in the rest of the English-speaking world He is not alone in this the eighteenth century has left its mark on the English taught in India even today, and many turns of phrase lost to us are still, to be heard in India Additionally, his deep reading in the classics of his own land has infused his writing with the philosophy and literature of ancient India, and so his language and exposition often reflect the thoughts and modes of expression of a culture unknown to the generality of Western readers Yet, put Ranganathan in front of a European audience and he will explain the most difficult concepts in a way which strikes home to the simplest listener He will lard his discourse with examples, and the questions and answers will flow on until the chairman of the meeting has to call a halt.

How is it, then, that Ranganathan can write in his *Elements* of accusations of difficulty in self-expression ? He is himself bewildered by his failure adequately to communicate when writing about the very subject nearest his heart[5]. I propose to attempt an answer to this question because of my experience in helping to prepare two of his books for publication in England, and in explaining to colleagues, young and old, the purport of his books on classification. It will involve some autobiography, but perhaps the reader will bear with me over this.

4 First Contact with Ranganathan

My first personal contact with Ranganathan was whilst I was serving with the Royal Air Force in Madras during the Second World War. I called on him for the first time when he was working on the galleys of his *School and college libraries* and he asked me to correct some of the proofs for him In doing so I found myself re-arranging the order of words to suit my English ear, although grammatically and syntactically I could find no fault with what was printed on the paper before me. After the first few galleys I realised that I ought to confine myself to the task set to me, i e to correct literal errors made by the compositor, and not to introduce a host of author's (or, more exactly, editor's) corrections. I was very perplexed about this, because in conversations and lectures Ranganathan's style did not strike me as being un-English As a consequence, I began consciously to compare my own speaking and writing styles, and so discovered for myself what every teacher of English must learn that word sequence in written English is of prime significance, but that in spoken English it is less so because one has at one's disposal a whole armoury of tricks (inflections, pauses, gestures) with which to emphasise a particular word, regardless of where it falls in a sentence

5 Ranganathan Studied in Britain

On my return to Britain in 1945 and subsequently to professional life in 1946, I began to write and lecture, and to harangue my colleagues about the work being done in India by Ranganathan[6] To my dismay, I discovered that my colleagues who were induced to open his books found them difficult to read and his ideas were, on that account, being dismissed as unworthy of serious attention. This attitude persists today in some quarters[7] Wells, who by now had made the necessary intellectual effort to come to terms with Ranganathan's work on classification, used to complain at the failure of others to do anything about this work, and urged me to write an explanation of Colon Classification and of the theory behind it

51 IDEAS COMMUNICATED AND PRACTISED

Various attempts were made at this[8], and then in 1949, Wells and I wrote our Fundamentals[9]. This little work was kindly received and began at least to lay the foundations of future understanding when it became a textbook in a number of library schools For Wells, although this lay in the future and was quite unknown to him at the time, this book was the thinking aloud in preparation for his editorship of the *British National Bibliography*. His newly recruited staff (November 1949) were inducted into the theory of Faceted Classification and Chain Indexing by the manuscript of this book.

52 PROLEGOMENA PUBLISHED BY THE LIBRARY ASSOCIATION

In 1955, Dr Ranganathan offered the revised edition of his *Prolegomena* to the Library Association as publishers and it was accepted, with D J Foskett acting as editor. In the upshot, a rearguard action fought by reactionaries of various kinds caused the whole manuscript to be broken up between a group of its author's friends in England, so that they could retype it for the printer Each of these voluntary "typists" would, if pressed, admit to some revisions of style here and there similar to those that I could not resist making in Madras a dozen years earlier Perhaps we did something to clarify the meaning for our fellow countrymen The book was certainly well received, and this in some surprising quarters

53 ELEMENTS PUBLISHED BY AAL

Dr Ranganathan next offered the publication of the second edition of his *Elements* to the Association of Assistant Librarians (U K) in 1957, and named me as the person to do any editing that was wanted The rearguard action was fought all over again with some rather elderly assistants, and I was pressed to do certain things, one of which was to take the earlier chapters out of their lecture form, and to put them into a normal expository style I undertook this work and for the first time had no qualms about re-writing one of my respected teacher's books, for he had asked me to do it This complete re-arranging (I hardly like to call it re-writing, for I used almost the same words and sentences) was a most interesting experience My aim was to try to suit the ear of the English speaking world, while yet preserving what was essentially Ranganathan's mode of expression

6 Writing vs Communication

Having read a little of the manuscript of E Coates forthcoming book on subject cataloguing[10], Ranganathan remarked, "Coates, you are trying to ride two boats at once It is not possible to introduce a new subject to readers, and also to set it out in a formal and logical way in the same book[11] " He then went on to point out that it is the job of the teacher to introduce the student to the highlights of a subject, and then to refer him to a textbook where he can find it set out systematically in such a way as to show the homogeneity of the subject. This incident throws a great light on Ranganathan's own difficulty in communicating through writing. He obviously writes his books on classification in the formal, logical style of presentation which, no matter how lightened by occasional flashes of humour, is nevertheless almost as arid as a legal code, and no one without a compelling interest in the law reads law-books The only exception to this in the case of his works on classification is his *Elements* This was, it so happens, taken down verbatim unknown to the author whilst he was delivering lectures at Bombay in 1944 The lectures were printed as a book and presented to him on the final day of the course The physical presentation of the first edition shows signs of hurry. His later writings on classification tend to be more and more in the precise language of the scientist or legalist

7 West to Interpret Ranganathan

It would seem, therefore, that the greatest compliment we in the West can pay Dr Ranganathan is to accept the task of editing his books as they fall out of print, so that they come in a style of language more acceptable to Western readers. Secondly, we can continue to write simple introductions which will sufficiently enthuse our colleagues to make them tackle the serious reading that his works demand

8 Solution to the Problem

To finish, there is a story that must be told A certain English Librarian serving overseas was forcibly retired to bed by a surgical operation Feeling quite well, if somewhat sore, he read "Palmer and Wells" to catch up with his reading on classification This led him on to Ranganathan's works, which he read with the continuous attention that only a bedridden librarian can find time to give His imagination was sufficiently caught to lead him when convalescent, to apply the Colon Classification to a small general library of some 20,000 volumes in a nearby institution. The result of his experience has been to convince him that he must now envisage re-classifying his own large library on this so simple and accommodating system One answer to Dr Ranganathan's problem of communication seems therefore to be an outbreak of temporary, disabling but not serious, illnesses among librarians, to give them time to read seriously and think deeply about their profession •

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CHAPTER T2

Dr Ranganathan: A Brief Appraisal

GIRJA KUMAR

0 Study of Ranganathan

I HAVE the privilege of knowing Dr Ranganathan for the past twelve years. There have been several occasions during the period to have seen him from a close range. While he has been held in the highest regard always, the admiration for him was admixed with awe during the first contacts. But it was quickly found out that the apparent hard crust has a soft core, which can be penetrated with some effort.

01 LIBRARY RESEARCH CIRCLE

The first few meetings of the Library Research Circle which used to be held at his Delhi residence on Sundays are still remembered. The holding of the meetings was usually delayed because of the sonorous recitation of Valmiki's *Ramayana* by Dr Ranganathan which preceded the business meeting. An irritant to several of us, was the holding of the sessions on Sunday afternoons. The constant prodding of "Rao Sahib", as he is affectionately known, at these sessions which were at times a monologue is still remembered with pleasure. Many new ideas were imbibed which have left their permanent mark on most of us.

1 Creative Period

We are too near to him to make a proper appraisal of the man and his work. Moreover, even though he has retired as a professional librarian, yet his work has not ended. As a matter of fact, he is now amidst the most creative period of his activity. He is constantly experimenting with new ideas, accepting some today and rejecting the same tomorrow.

11 ADOPTION OF NEW IDEAS

Some of us find this too irritating. The administrator in us revolts against the very idea of change at short intervals. As Sayers has aptly put it: "Librarianship is still in the shadow of traditional practice, and still suffers the consequences of its backward technology". Still, we take comfort in the assertions of several distinguished library authorities that the task of reorganizing the library collections is a hopeless one and beyond the realm of human possibility.

12 New Libraries

But there are too many skeletons in our cupboard As the saying goes, we have got to face the facts of life Happily, we, in India and other underdeveloped countries, have a slight advantage over the others in the same way as the technological revolution is easier to carry out in countries with very little industrial development There is some advantage in starting with a clean slate With the libraries still to develop on proper lines it should be less difficult, other things remaining the same, to implement the new ideas

2 Contribution to Indian Library Movement

While people discuss, debate and argue about Ranganathan's ideas and techniques, they are apt to overlook his great contribution to the growth of library movement in India The public and research libraries as well as the library schools in India are the best tribute to his public career He has been an uncompromising advocate of the open-access system The structure of many recent library buildings owes a great deal to his ideas Library legislation in several Southern states has been the result of his unceasing efforts The Indian Library Association of late and the University Grants Commission in the recent years has made much use of his advice and guidance He has done much pioneering work in the field of library education The listing above is merely illustrative to indicate his vast contributions to the library movement in India

3 Ranganathan Phenomenon

How do we explain the Ranganathan phenomenon ? It is, however, not for me to speculate about the reasons for the same But there is no doubt that the best of the Tamil Brahmin is in him The mathematical exactitude and abstruseness on the one side and the traditional culture of the *Puranas* on the other are exemplified in his writings The best example of the first kind is his *Prolegomena to library classification*. The delightful *Five laws of library science* which many consider as perhaps the best piece of prose by him is to be placed in the second category The economy and the long-windedness in expression which are the characteristics of the two opposite styles combined in one man may not be to the liking of many, but my preference is on the whole for the extremes The bastard style which has neither the scientific exactitude nor a natural flow will not get my vote.

4 Works of Ranganathan

The range of Ranganathan's thinking is so vast that he has covered nearly the whole field of library science. The score of works by him already exceeds fifty The *Annals of library science* and its predecessor the *Abgila* are almost his single-handed creation

41 CLASSIFICATION

Classification is his favourite child. The Facet-analysis is probably his most lasting contribution to library science His practical application of the theoretical principle of library classification has been biased in favour of the physical and biological sciences This is but natural because of his earlier training as a student of mathematics and on account of the greater research activity in these fields. He has already shown the way to the profession for future work in the social science

42 OTHERS

While emphasing his contribution to the field of library classification, we should not under-rate his contribution to the other areas The soundness of the classified catalogue and the Chain Procedure has been recognised in the library circles The *British national bibliography* has successfully experimented with the classified catalogue (including the chain procedure) and has found it eminently suitable for its purpose His book *Library administration* is a perfect guide for library bureaucrats prepared to give sympathetic ear to Dr Ranganathan's meticulous instructions.

5 Scientific Approach

It would be less than just to Ranganathan himself to insist on the acceptance of *all* ideas and techniques as gospel truth The zealots do no less wrong to Ranganathan and his work. A great deal of his work is of an experimental nature The same which he rightly defends today, he in all likelihood might reject tomorrow. The constant search for the nearest approximation to truth is the most distinguishing feature of the scientific method Ranganathan is a scientist *par excellence*.

It is not exactly correct to say that he rejects many of his old ideas. What actually happens can be appropriately described in the Marxist jargon i e the change of quantity into quality The qualitative transformation while rejecting the old ideas, at the same time grows out of it.

51 UNSCIENTIFIC APPROACH

Several people reject his ideas out of hand. A minority holds the view that there is not much new in them and that their authorship may be traced to scholars preceding him in the library field While the criticism may be valid on points, it is unjust as an over-all approach. The labour on several times has been wasted, because the criticism is mostly based on the lack of knowledge of Ranganathan's basic ideas

52 Scientific Method

When we come to evaluate Ranganathan's work properly, he will not stand or fall by his particular theory or technique Some of it may become obsolete in the natural course of time, others will survive for a long time to come This will be immaterial in the final analysis. The most important single fact about him is that he is a pioneer of the highest order He has toppled too many false gods of long standing to the discomfort of many. The application of the scientific method to library science owes a great deal to his efforts over a period of more than thirty years

6 Study of Ranganathan

What Ranganathan badly needs is his Boswell, or, perhaps, something more than a mere Boswell A critical evaluation of his ideas and techniques in their historical perspective is long overdue We also need several volumes to explain his contribution in note-so obtuse language Some useful work in this connection has been done in England There is not much comparable to it being produced in India Ranganathan is also a fit subject for a doctoral dissertation

61 Work in Future

It is necessary to continue his work in the future There are some hopeful signs on the horizon, but larger than the size of a man's palm The question does not concern a few dedicated individuals It should be viewed in this country in a broader prospective The proper course is to institutionalize the work at the level of the national library, library associations and the library schools There should be some way of creating the proper atmosphere in the library circles, which unfortunately does not obtain today, to carry forward his work

7 India's Responsibility

It would be interesting to speculate about the future of his enormous contribution to library science. The countries with the best organized library system, would be the least inclined to experiment with his techniques. Some very useful work, especially elucidation of his ideas and the application of his techniques at a very specialized level, will be done in Great Britain. The maximum application may be done in India, but it will take some time, before we do any original work based on his ideas The Soviets are the tardiest in accepting any of his techniques, but I think when they come to accept some of them, they will go the whole hog after them Whatever way the things shape up, Ranganathan's name is certain to become a part of the librarian's folklore

CHAPTER T3

Dr S R Ranganathan

B I TRIVEDI

0 Distinguished Librarians

"EACH country in turn seems to produce a distinctive Librarian who is the proto-type of his profession. Edward Edwards and James Duff Brown in Great Britain, Dewey in America, Greasel in Germany, de Lisle in France, Paul Outlet in Belgium, are examples which come to mind without any thought of slighting their compatriat Librarians. India would probably choose Shiyali Ramamrita Ranganathan born in 1892"[1], observes Berwick Sayers; and it is true.

1 Works of Ranganathan

Dr Ranganathan is to an Indian what Dr Melvil Dewey was to the United States of America and James Duff Brown was to the United Kingdom. Few people would care to deny, whether within India or without, that Dr Ranganathan's works have revolutionised world thought on classification. Whether from the standpoint of daring originality and novelty of thought or prolific scholarship, his record is hard to beat. Even making every allowance for the common idea that no man is a prophet in his own land, Dr Ranganathan was mainly responsible for bringing the Indian Library Association into existence. He is a unifying force from where different library organizations and associations derive their inspiration. Dr Ranganathan will be long remembered not only for his works but also for his efforts towards creating a band of devoted workers, both inspired and burning with enthusiasm for the cause so dear to him.

2 Mental Revolution

It may not be out of place to trace the mental growth of Dr Ranganathan. His birth almost synchronized with the birth of the Indian National Congress. Like most educated Indians, he chafed under a sense of frustration inevitable under foreign domination, however benign it may have been. This was all the more inevitable because the system of education in vogue in India emphasized the superiority of Western Culture. Western politics made everything Indian look squalid and paltry. In the political climate of the country, the tallest of Indians felt dwarfed and the sense of humiliation stunted their intellectual growth. But the countries in the West can hardly appreciate the mental revolution that India underwent when Rabindranath Tagore was awarded a Nobel Prize for literature It gave a new pride to Indians, a new sense of life and a new hope for the future Dr Ranganathan too was affected by this He decries the tendency to imitate outmoded foreign standards or to perpetuate the hesitant methods of the decadent past.

"Fatalistic determinism and indifference derived from the absorbtion of a wrong presentation of her values of life during the last century by Western Scholars and a pseudo-cheerful and foolhardly acceptance of anything that comes along on board the ship, born out of political protection and subjugation should be avoided. The mood to turn to serious books dawred in the people Catch-penny books, morally subversive literature, and self stultifying thought must be avoided so much as to disappear altogether. The generation of India's adult brought up by the imperalist will raise a false alarm and call this a danger to freedom of the press and the advent of censorship. They may call it impracticable, idealistic and uneconomic "[2]

3 Classical Works

He set out with a missionary zeal to reorient the role of libraries in terms of Indian requirements and the first fruit of his efforts was the publication of *The Five laws of library science* The book is of importance in as much as it constitutes his philosophy of public librarianship and it dives deep into the functions of a library as a social institution and their implications Gradually, his study of *Organization of knowledge* resulted in his *Prolegomena to Library Classification* This appeared in 1937 and it stands out by itself But his great contributions that have revolutionised world thought on classification and extended his reputation beyond the borders of India are *Library classification Fundamentals and procedure* and *Colon classification*

According to him, "Phenomenal world in fact each phenomenon is multidimensional. To comprehend it ideally, the mind must be capable of taking in many dimensions simultaneously Most of our primary senses have evolved to the stage of taking in only three dimensions. The intellect however is able to comprehend many dimensions. Of late mathematical discipline has so sharpened intellect that it has just become able to reach up to the concept of infinite dimensions as a limit of finite ones."[3]

"As Librarians our interest is concerned with a very important correlate of this phenomena Multi-dimensional concepts have to be translated into multifaceted class numbers The function of the multi-faceted class numbers is to reduce arrangements to a single dimension, because books have to be arranged spatially in a line. Books have in the first instance, to work on the primary sense of sight. Though our sight is capable of taking in three dimensions, we have not yet found out the technique for arranging books conveniently on a three-dimensional basis . we cannot get away from the fact that, at present state of our evolution, arrangement of books has to be only linear. It is this factor which constricts the development of the artificial language of ordinal numbers, called a scheme of Classification. The Phase-analysis, the facet-analysis and the formation of foci in the facets by successive denudation are all means used to adapt what is many dimensions, for display in a single dimension for purposes of arrangement on shelves "[4]

4 Colon Classification

The Colon schemes of classification has been forged with the avowed object of realising co-extensiveness between the "thought" of the book and its Class Number It individualises subjects of any degree of intension and arranges subjects in a filiatory order and facilitates the possibilities of translating even the multi-focal books to the utmost intension Facet and Zone analysis, multi-point hospitality and octavisation of digits and provision for optional facets are the unique contributions of Dr Ranganathan to the philosophy of classification

5 Chain Procedure

Formidable indeed is the range of his aptitude Another valuable contribution to the philosophy of library science is his Chain Procedure Method explained in the *Theory of library catalogue and The Classified catalogue code* Both, dictionary catalogue and classified catalogue propose to achieve the same ends and both use the same logic, the dictionary catalogue substituting a system of references to make up for the logical structure of the classified catalogue The latter derives its advantage not simply from its structure but from the choice of the classification system If a co-extensiveness between the "thought" of a book and its class number is realised, a study of successive links of the chain of the elements in the class number provides not merely an understanding of the class number but also a key to the subject references which might be used in a dictionary catalogue Classification with the help of its class number featured as chain is thus able to keep a catalogue to build up its subject index entries, thereby displaying many of these relation between subject which are not displayed by the classified order. This linking of two techniques namely classification and cataloguing is termed symbiosis by Dr Ranganathan and the method of deriving subject index entries he calls the chain procedure method.

6 Boundless Energy

Arnold Benett once pointed out that we all have the same amount of time—twenty four hours a day. But it is not time that counts, but energy. And this man apparently has boundless, illimitable energy, the range of his abilities pervades all fields. On India attaining freedom, the architect and builder within him soon realised that. "India's independence implies freedom to develop her library system on a nation-wide basis and obligation to develop her library personality so as to become a peer of other nations in the international library sphere "[5]

About library manpower he says. "The top group may have to be 900 strong They must be the best of men which India can find. They must be men of highly integrated personality, capable of creative thought, leadership, and daring vision and above all endowed with single-minded devotion to their calling, application and industry "[6]

He does not forget the status and the welfare of the profession. "But India's governments—whether at the Union Centre or in the State—have yet to realise that the men in their departmental libraries should be taken as equal partners by the heads of the departments. India should cease to regard them as clerks, even to enable, the officers expect and accept all the help they need from the printed sources of knowledge She should give the departmental librarians the status, the salary and the freedom due to the men of any other technical service as engineering, technology, agriculture, forestry or archaeology As many as 600 Departmental Libraries should soon begin to irradiate the rooms in the Secretariats "[7]

7 Picture in Miniature

This is just a picture in miniature of some of his important contributions A survey of all his works which number more than fifty is beyond the scope of this brief contribution But it must be said that he has a mind like a steel trap Besides, his insight into problems, that would confuse and mystify people of less keenness or discernment, is just short of amazing

8 Father of Library Science

In view of the great service Dr Ranganathan has rendered to his country, he richly deserves to be called "The Father of Library Science in India". But as a librarian and a classificationist, his contributions are truly international in character This universality makes Dr Ranganathan a citizen of the world, equally at home in Madras and at the International Study Conference at Dorking. Dr Ranganathan battled first to prove the worth of his theories. Having achieved this, he has been battling to convince his fellow countrymen that all is not well in the state of Denmark, that India must awaken out of her complacency and remould her library institutions in harmony with the age which has become democratic. It is easier to preach than to practise, but in Ranganathan's case practice keeps pace with preaching.

81 CANDLE IN DARKNESS

We conclude by saying. "Growth is slow when roots are deep But those who light a candle in the darkness will help to make the whole sky aflame."[8] He has done his duty, though he may feel with all the great souls who have worked and suffered this is not enough so much more remains to be done

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CHAPTER T4

Dr Ranganathan and Library Science

HAKAM SINGH

1 Library Thought

LEIBNIZ once said, "If the world goes on this way for a thousand years and as many books are written as today, I am afraid that whole cities will be made up of libraries." Two hundred years later Dr Ranganathan gave a positive orientation to this view in the Five Laws. The period between Leibniz and Dr Ranganathan is marked by intense activity and immense growth in the library world leading to revolutionary changes in the traditional concepts and activities; the changes which found their prophet in the latter.

11 DEWEY AND CUTTER

When Dr Ranganathan appeared on the library scene, the dominant figure had been Melvil Dewey. Of him Oliver Garceau writes, "The great library mechanic of this age was Melvil Dewey, with his Decimal system of book classification, his interest in library equipment, and his training of skilled technicians."[1] While it was his system of book classification that led the way to a scientific organization of books in libraries, his great contemporary, Charles Ammi Cutter, provided the Rules for Dictionary Catalogue which became the starting point of every future code for library cataloguing. Universal validity of Cutter's Rules is generally recognized and they are byword in scientific precision and clarity.

12 BROWN AND SAYERS

In the U K, pioneering efforts of James Duff Brown, the hero of 'open access', and others had resulted in better organization of library services in that country. On to Brown's scheme of classification, Berwick Sayers added a theory of classification characteristically remarking, "It must be borne in mind, however, that the classification of knowledge should be the basis of the classification of books; that the latter obeys in general the same laws, follows the same sequence."[2]

13 Ranganathan

The efforts of these pioneers and the techniques they devised made libraries effective agencies of popular education. All these strands met and crossed in the versatile personality of Dr Ranganathan A mathematician by nature and training his analytical mind was able to see the library as a significant part of the social process, and his intuition sensed the direction of its progressive movement

2 Problem of Faith

Every human activity requires an ideal and a faith. Every profession needs a philosophy. It was about six thousand years back that man discovered his capacity for distinctively human activities. "These began with the invention of writing and the organization of government." With writing, libraries came into being to facilitate communication through the graphic word. It is somewhat ironical that a historic institution of such basic importance had lain neglected for so long The origin of this neglect probably lay in the fact that a scholar likes to be his own librarian and the perfect librarian, whenever one is met, is a scholar Philosophers of the calibre of Callimachus and Leibniz and scholars like Brunet and Gesner had been librarians. In general, however, the scholars shunned the epithet which was most willingly donned by the keeper. The tradition perpetuated the belief that the librarian is a keeper.

But that could not persist for long Especially after democracy proclaimed equality as one of its goals and the graphic record increased to unmanageable size The keeper must have then found himself ill equipped for the new library of democracy The combination of qualities required for the new role was "scholarship in Mark Pattison's sense, *ie* judgement, discipline and scientific " "The librarians' speciality", writes Dr Ranganathan, "must be bibliography, and their attitude must be that of a student "

As masses turned to libraries for cultural improvement, the scientists started looking to them for help in their researches and studies. As J D Bernal acknowledged, "Librarians have striven with very good will to give scientific research worker the best service they could but they have not had much assistance in finding out what it was that the research worker needed At the same time the research worker has never been able to make the fullest use of the special library largely because of his ignorance of the possibilities of recent developments in library technique Many research workers do their own library work, in an amateur way, or discover for themselves many of the techniques already long known in the library world."[3] Developments, such as these, meant a big breach with the past and involved fundamental changes in the library concepts and techniques. They raised a problem of faith as any new way of life always does. The new library, therefore, required faith in its social value. It also needed an ideal to which it must at all events be able to turn for judging the correctness of its practices.

Although library has a deep social purpose which informs even the smallest activity undertaken by it, yet it did not develop into a philosophy in the hands of the librarians of the past. Melvil Dewey had characterised the social purpose as the 'best reading for the largest number at the least cost'. Dr Learned went a step further and called library "a community intelligence centre". It was Dr Ranganathan who brought out the 'vital principle' or the "spirit of the library" by stating that, "It is an instrument of universal education and assembles together and freely distributes all the tools of education and disseminates knowledge with their aid "[4]

3 Five Laws

In the Five Laws, Dr Ranganathan worked out both a teleological explanation of the library and provided a set of norms for librarians to follow The First Law, Books are for use, asserts the central importance of graphic word in human activity. All that librarians do, even the seemingly most insignificant bit, assumes significance in the light of this Law.

The Second Law, Every Reader His Book, provides a positive philosophy for librarianship Its lessons have been summed up in

"There is room for all
Let not the mean
Or learned dean,
Restrict the books
T' a favoured few
We've Books for all "

This philosophy found universal acceptance is the Unesco Manifesto for Public Libraries, which declares, "The public library should be active and positive in its policy and a dynamic part of community life " Grounded in the democratic belief that every person is a potential reader the Second Law has become prophetic.

The Third Law and the Fourth Law bring out the purposive nature of library service. "Every Book its Reader" and "Save the Time of the Reader" assign to the service a central role in what Jesse H Shera has called 'social epistemology' —interaction between recorded word and social dynamics

The Fifth Law, "Library is a Growing Organism", is a statement of faith in the library's future and an expression of its organic nature. Books may or may not survive long but the library will remain indispensable to civilized living. So long as graphic record remains, and human progress is inconceivable without it, it will keep on growing and the library will grow with it.

The library, it may be mentioned, is not an organism in the strict biological sense but only by analogy. It is a living institution intimately related to human life and activity, in that sense it is organic within the community it serves. A growing organism which works to sustain the complex structure of society cannot but be confident and proud of itself That some people prefer to shut their eyes to such a historic reality is a pointer that the truth needs to be reiterated rather than abandoned

4 Library Mechanics

The Five Laws called from the library practice by an inductive process of reasoning provided fundamental statement of the essentials of such practice which consists of technique and service. While the service hinges on the will and competence of the librarian, the technique requires sound mechanics. It was in the domain of library mechanics that Dr Ranganathan made his most significant contribution.

The importance of library mechanics lies in the fact that the organization of collection is the life blood of a library It stems from the necessity of identifying and locating materials to facilitate their use. For this very reason, organization of collection has been perennial problem for librarians Although there had been many schemes for book arrangement and cataloguing, some of them of considerable merit and utility, there were no scientific principles, in short no adequate theory on which these practices could be based.

In the absence of satisfactory theory of book classification the problems facing the classifier were growing acute. As H E Bliss wrote, "The educator and the scientist agree that the data and subject matter must be classified, each study and every book must organize its subject matter. There must be organization of knowledge, thought and purpose It must be functional, but it must first be structural It should be as free as possible, but it must be coherent and stable, else our whole scientific and educational undertaking would crumble in confusion "[5] That means the materials were required to be arranged according to their subject matter in such a way as to place all the possible related subjects together in a sequence which is both filiatory and helpful to readers

These requirements proved so exacting that no scheme of classification till the advent of Colon was able to fully meet them Those schemes which purported to be pragmatic were obsolete even before they came out for the simple reason that the universe of knowledge is not static but a dynamic continuum It is ever advancing both horizontally and vertically It is spreading and growing sharp and complex with ever increasing speed. "Knowledge rooted in reality," Says Bliss, "expands in all directions, ramifying in diversified specialities, each branch a synthesis of concepts, and each of these like a leaf assimilating new materials. In the tissues and fibres of the trunk and branches the synthetic products of the bough are built up, and in their unity inheres the strength that supports the expansive structure."[6]

That means with the exception of a few monographic treatises the subject matter of the recorded materials is composite in nature. It is not simple bits of knowledge which may be derived by a logical division, but compounds showing complexities which escape the sway of logic. Therefore, any scheme of classification based on logical division of universe of knowledge would naturally reach a dead end from where it would have to start all over again To classify such a universe, therefore, it becomes necessary to discover permanent categories which inhere in the dynamic universe, i e to discover the universal in the particulars And if we fail to perceive the vital and the permanent underlying it, we may as well abandon the task of classifying the universe as altogether hopeless.

To find the permanent categories which are universal in nature, we may have to enquire into the basis of human knowledge itself. In general, human knowledge is by-product of human activity and cannot go beyond the bounds of such activity It must, therefore, flow from it and reflect the relations subsisting therein. It follows that whatever conditions human activity must also condition the knowledge of it. Now, the world of human activity is conditioned by matter, space, time and certain processes. Human knowledge should also have the same categories of matter, space, time and the processes conditioning it And it is these categories alone which will combine to form any conceivable subject If we are able to mark these categories out in the universe of knowledge and map out their behaviour in the human thought process, we have the key to the whole problem of knowledge classification We can not only, then, classify such a universe satisfactorily, but also construct new subjects, *a priori*.

5 Five Fundamental Categories

It was the genius of Dr Ranganathan who discovered that the universe of knowledge can be predicated of five fundamental categories These categories are all prevasive in the universe He postulated them as Time, Space, Energy, Matter and Personality. Although these categories were postulated i e simply assumed, yet because they were based on a sound analysis of human activity underlying them, they have stood the test of time and vindicated the truth that the human knowledge does, in fact, flow from and bear the impress of myriad complex relations found in the parent human activity

Every subject then is a manifestation of the five fundamental categories and can be analysed into them They provide a basis for analysis of any subject into its constituents which when combined or synthesised reproduce the subject and thus enable its proper representation in a classificatory language. The unique thing about the fundamental categories is not that they facilitate analysis of a subject but that they render it intelligible by revealing the relation of its constituent elements.

Dr Ranganathan further postulated relative significance of each of the categories in the human thought process and worked out a theory of notation for the translation of subjects into a classificatory language of numbers. These principles put an end to a barren debate on the subject With such principles as the basis, the task of the classificationist remained one of finding out and listing fundamental constituent terms in particular subject fields and provide a key to their commonly observed combinations by facet formula

6 Genius of the Library World

Dr Ranganathan's contribution to the science of book classification has made him the loci genius of the library world. "The major theoretical developments of twentieth century classification," writes B C Vickery, "have been most clearly formulated by S R Ranganathan who has, however, concentrated his attention in an almost mathematical way on the general structure of knowledge."[7] This view is affirmed by D J Foskett who wrote, "There can be no doubt that, this technique, which consists of itemising each aspect or 'facet' of a subject, must be the basis of all future schemes of library classification." Acknowledging the contribution, H E Bliss opined, "Ranganathan's mind comprehends the immense diversity and intricacy of objects, aspects, and relations in nature and in life, and he would synthesise this complexity adequately in a system of bibliographic classification . Yet we must repeat, as we did in reviewing the *Prolegomena*, that the erudition, industry, insight and ingenuity of the author are truly admirable The system (of classification) is well worth study by those we contemplate constructive developments in bibliographic classification "[8] J H Shera echoed the same opinion when he wrote, "it remained for S R Ranganathan to develop fully the application of this Aristotelian principle (fundamental categories) to the analysis of the structure of recorded information."[9] Finally, Berwick Sayers has characterised this age as an "Age of Ranganathan"—the highest tribute that could be paid to a librarian by the mature mind

7 Symbiosis with Catalogue

Dr Ranganathan completed the task of organization of collection by joining his schemes of classification in symboitic relation to a classified catalogue having an alphabetical index His Chain Procedure is well on the way to become universal. As A J Wells wrote, "His theory of classification is at the very heart of Britain's newest undertaking in the field of librarianship . It has revivified a failing classification and imposed upon it a rhythm which except in those parts where such an imposition is impossible—accords with the requirements of the user, it has illuminated the classified part with features, welded the whole into an easily comprehended system with Chain Indexing and made possible the passing on to local cataloguers of subject information."[10]

8 Documentation

Library techniques today, thanks to Dr Ranganathan, possess the necessary techniques for meeting all reasonable approaches of the library users to the materials they need In one particular, Dr Ranganathan's contribution is epoch making The scientist and research worker now need no longer turn disheartened from the library because a document they require cannot be identified and located The library has moved into the centre of the scientific research and its techniques enable it to facilitate communation by organizing the graphic records. It has developed documentation and other techniques for helping the researchers and may in the near future assume the role of leadership in guiding research just as the public librarians have assumed the role of leadership in their fields through readers Advisory services.

91 The Imperative of Second Law

It is not sufficient merely to instil faith in the library's importance, and streamline its mechanisms, it is equally necessary to make library service the *sine qua non* of society by providing free and satisfactory service for all Any set up of public library service must meet two requirements in its organisational make up it should be close to people so that the 'efficiency of local library service can be enforced by the demand, influence and power of those who are served', and it must be efficient and economic These two requirements tend to oppose each other, but an organisation cannot last unless it provides for their coalescence

In community, the library service is essentially of local nature and derives its sustenance from community's use and appreciation of its services The administration of such a service must be in the hands of local self-governing bodies But the units of local self-government are financially weak and fitful in their working In such weak hands the library service cannot be expected to deliver the goods The state, on the other hand, has sufficient wherewithal for providing a satisfactory stock and personnel for efficient service But its administrative machinery is too mechanical and its efficiency cannot by itself be an inspiration to people to use the libraries One is inclined to agree with the views of the Team for the Study of Community Projects and National Extension Service, that "so long as we do not discover or create a representative and democratic institution which will supply the local interest, supervision and care necessary to ensure that expenditure of money upon local objects conforms with the needs and wishes of the locality, invest it with adequate power and assign to it appropriate finances, we will never be able to evoke local interest and excite local initiative in the field of development "[11] Dr Ranganathan visualised this fundamental political truth when he wrote, "For most local services, and particularly for library service which involves sympathetic, intimate, personal knowledge and community of interest, the service area needs to approximate to that of social community, so that civic consciousness may be stimulated and the forces of local interest and sentiment may be harnessed to the task of making local service readily accepted".

92 **Union Library Law**

In his '*Library development Plan*', a classic work on the organisation of libraries in the country, Dr Ranganathan provides the result of scientific analysis of the problems of organisation and also a platform for the library movement. Everyone today agrees that India is in urgent need of public libraries. libraries which are free for all and are supported by public funds. Such libraries cannot stand alone in the modern integrated socio-political set up. They must form a system closely connected with the set up. The system has, of necessity to be well planned and firmly rooted in law. With a deep insight, he enunciates a statewide library law to create a legal framework for the establishment of library system in each state The framework provides, inter alia,

(*i*) the agencies which will administer the services in their areas. He entrusts the task of administration to local self-government units with a rider that small sized units should join the bigger ones, so that their joint resources may afford them economic viability—an essential ingredient of a good service.

(*ii*) Permanent source of library support with a provision for the maintenance of standards in service.

93 **Library Law in States**

His personal efforts in espousing the cause of public library service has paved the way for a statewide system of library service throughout the country As a consequence Madras and Andhra have already put public library legislation on the statute books and many more governments are constantly perturbed by the absence of such legislation in their states As in other fields so in this Dr Ranganathan has shown us the way

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CHAPTER T5

Dr Ranganathan: The Man and his Works

H D SHARMA

1 Sentimental Prelude

IT should not be difficult to write about Dr Ranganathan as he is not a many-faceted man. He is a simple, truth-loving person who has devoted his whole life to a single cause. But it is not easy for his disciples like me to write about him. Whenever I think of Dr Ranganathan I experience a tumult of strange feelings and emotions—feelings of respect, of reverence, almost of worship. I cannot think of any other person who arouses in me similar feelings. He is my hero; he is my idol. It is sentimental. It is idolatory. Yes. But I am not ashamed of it because it is sincere; because it comes right from my heart.

Why does he stirs such feelings in me ? May be, because he was my teacher. Or, perhaps because he is simple like a saint. Or, because he is devoted to a noble cause. But feelings like these cannot be analysed or explained. They can only be experienced.

2 As a Teacher

I knew him first as a teacher. And what an experience it was ! It was always a pleasure to be in his class. I do not remember missing any of his classes—quite an unusual thing for me. His lectures were a real treat. No they were not lectures at all. It was all discussion. And he used to create such an informal atmosphere in the class that all of us felt as if we were sitting in our drawing rooms. As a result every one of us took part in the discussion.

He taught us much more than library science. He taught us to think properly. He taught us how to make the most difficult problem a simple one by analysing it step by step: not a mean acquisition for us librarians who have to deal with ideas and printed material.

3 Breathing Library Science

Apart from his intellectual impact, his life itself has been a great lesson for us. He could achieve so much in life because he was not led away by material comfort; because he worked so hard and because he devoted all his energies in developing library science Library science is his religion. It is the main source of his happiness (no reflection on Mrs Ranganathan). I have never heard him talking anything except library science—classification, cataloguing, development plans, legislation, and the rest

4 Magnetic Personality

One may imagine that a person whose conversation is limited to such a narrow field must be a very uninteresting man. Far from it You lose the sense of time when you are with him. You get fascinated by his talk; you get intoxicated. You sit right there bewitched His enthusiasm is infectious. I have seen non-professional men talking library science with him for hours

5 Monumental Works

Dr Ranganathan is the most prolifice writer who has ever written on library science. There is hardly any aspect of librarianship on which he has not written But it is not the quantity which is important It is the light which he has shed on various problems facing librarianship and the solutions which he has evolved that are significant.

He was perhaps the first librarian to see the underlying unity in all the varied library techniques and processes. Starting from the 'Five Laws' he has tried to unite all the aspects of librarianship in one big sweep His 'Five Laws' are like the thread of a necklace on which are strung the beads of book-selection, classification, cataloguing, reference work, documentation and the rest He has tried to bring unity out of confusion and has succeeded to a remarkable degree

6 Greatest Achievement

His greatest achievement undoubtedly is in the field of classification Colon may not be an absolutely original scheme (Which scheme is ?) For many of his devices he has borrowed ideas from Cutter, Brown, Dewey and Universal Decimal Classification. But even in the case of the devices he has made such an appropriate use of them and has been able to discipline them with such skill and dexterity that the result is not far short of originality

61 FUNDAMENTAL CATEGORIES

And none would deny that his method of analysing knowledge according to Five Fundamental categories, assigning a facet formula for each subject and then putting the relevant numbers for each foci and then connecting them with appropriate connecting symbols are very much original His making connecting symbols an integral part of classification is unique.

62 Colon Classification

Colon Classification may not be the final word in classification of printed material but whatever be the ultimate scheme (if ever there will be any) it will be on the lines which Ranganathan has drawn for us Because only Colon classification has got the potentiality of keeping pace with our ever expanding and intermingling knowledge. Even his severest critic Bliss had to admit that "the erudition, industry, insight and ingenuity of the author (of Colon Classification) are truly admirable. The system is worth study by those who contemplate constructive developments in bibliographic classification."[1]

7 "Age of Ranganathan"

His colossal contributions in the field of classification have dwarfed his achievements in other spheres of library science He has fought valiantly for the Classified Catalogue. His *Classified catalogue code* is the only code of its kind in existence to the best of my knowledge His 'Theory of Cataloguing' is a classic on the subject His Development Plan for India is a monumental work in its own right And he has demonstrated his mastery over details and routines of library work in his *Library Administration* I cannot improve upon what late Mr Sayers wrote about Dr Ranganathan

"If there is what may be called an age of Dewey, there is also most certainly an Age of Ranganathan He has shown us "a way forward", as Bernard I Palmer and A J Wells say in their brave little *Fundamentals of library classification* 1951; his name is on the lips and pens of all who are concerned with classification, often with admiration, sometimes with rancour, always with the respect that persistent loyalty to ideas and ideals commands."[2]

8 Pioneer in India

For us in India his contributions are especially significant He was the first trained librarian in this country, he was the first librarian to organise a library course and a library association in this country, and it was due to his persistent efforts that the first library bill was passed in this country He has fought tirelessly for the rights of librarians with much success

Let us wish him many happy returns of this day so that he may guide us and may lead us further.

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CHAPTER T6

India's Contribution to Library Science

R S SAKSENA

1 Evolution as a University Discipline

LIBRARY Science as a separate subject for study has received its recognition quite lately. It was in the year 1887 that Melvil Dewey started the first school of librarianship in the Columbia College, New York for imparting training to librarians in library work. Similarly, professional training in librarianship started in Great Britain in the year 1896 when regular professional examinations were first conducted by the Library Association of Great Britain. In India the subject is of even more recent origin. It was in 1915 that Dickenson, an American Librarian, started a short term course in Librarianship in the Punjab University. Regular training classes in Library Science came into vogue from the year 1929 in Madras under the able guidance of Dr Ranganathan. Library Science as a fit subject for post graduate study got recognition in India only as late as 1938 when the first Diploma Course in Library Science was started at the University of Madras. It was the Delhi University which recognised Library Science as a fit subject for Master's Degree and Ph D Degree in 1947. The initiative for this also was taken by Dr Ranganathan and Sir Maurice Gwyer the then Vice-Chancellor of the University accepted his suggestion.

11 CHANGES IN SOCIAL PURPOSE OF LIBRARY

In this connection, it is needless to say that the recognition received by Library Science is directly connected with the social pressure and the growing need of the society for well managed and well organised libraries run on scientific lines. Library, as a social institution of immense potentiality, has been serving the community from very early times in different changed roles. A century ago when knowledge was for the chosen few and the book production was at a very low ebb the nature of the work of a librarian used to be merely that of a caretaker, and no technique in librarianship was required during these days in managing the libraries. Nor any technique of librarianship was needed even when mental relaxation and recreation were added to earlier purpose of the preservation of books. However, with the recent advent of Democracy in knowledge and cheap and mechanical methods of mass production of books, the social purpose of library made it also an essential medium for mass education Still more recently the library is gaining recognition as an agency for communicating, nascent thought to intellectual workers, and helping research workers in their research work through documentation service These two latest new social purposes of the library require special scientific techniques for meeting the growing need of society; and it is here that the application of library science as a subject comes to play its part in modern library. The delay in recognition of Library Science as a subject has been due to the above historical reasons in regard to the social purposes of Library

12 HISTORY OF THE DEVELOPMENT OF THE LIBRARY SCIENCE

The need and importance of libraries was first realised by the progressive nations of Western countries, and they used the public library as a potential agency for their social betterment and educational and cultural uplift The early development of Library Science took place largely in relation to the public library systems of Western countries. But since public libraries attracted very few University trained persons towards the profession, much of research and progress could not be made in the subject Some new methods and techniques did evolve in those days in Western countries. But no systematic study of the subject leading to the formulation of the unifying philosophy behind the varying library practices could be found by the Western Librarians.

In India the development of libraries with its new functions took place hardly forty years ago Unlike in the West, University Libraries developed first in India and Public Libraries gained importance only in quite recent years The University Libraries attracted towards the library profession men with a University training and the research aptitude The University trained librarians in India studied the subject of librarianship thoroughly and systematically and raised the status of the subject of librarianship to the level of a science

2 **Dr Ranganathan's Contribution**

India was fortunate to have for its first professional Librarian Dr Ranganathan He was a brilliant teacher of Mathematics in the Madras University In 1924 he was appointed its first University Librarian During his studies at University College of London Dr Ranganathan got an opportunity to visit a number of libraries in the United Kingdom He observed their working procedures very intimately and studied thoroughly the varying practices followed by them. He felt very uneasy over the absence of any relationship between the varying methods adopted by Western libraries on the one hand and the outdated teaching method followed by the schools of librarianship of the Western countries. On the other as a result of Ranganathan's uneasiness in the absence of a few fundamental laws to which all the varying library practices could be traced. On his return from England he started vigorously, systematic research work in India in the field of Library Science; and it is as a result of his zealous, painstaking efforts that enormous research work has been done in this field in India and that India has been able to contribute a great deal to the foundation and development of library science. The researches of Dr Ranganathan in Library Science have been responsible for enhancing the prestige of the country in the International sphere; and at present one can hardly imagine any book being written on library science in any part of the world without mentioning India's contibution in the field of Library Science The following are a few selected Indian contributions in the field that have won world-wide recognition and have gained praise from practically all the leading librarians of the world

3 Emergence of Library Science

Till the 1940's, no one was prepared to recognise Library Science as a scientific subject of study Prior to the enunciation of Ranganathan's Five Laws of Library Science, the subject was called "Librarianship", and a systematic study of the subject based on few generalised principles was not possible Ranganathan's Laws of Library Science and canons of Classification and Cataloguing put the subject on a sound footing and made the scientific study of the subject possible at all levels The argument in support of Library Science being a subject of scientific study are given in detail in Ranganathan's book *Preface to library science* 1948 (Delhi University Publications, Library Science Series, 1) and in his *Five laws of library science* 1957, (Madras Library Association, Publications Series, 23)

4 Classification Scheme

In order to make library an institution of real service to the community and specially to research workers dealing with micro thought, India developed in 1934 a classificatory scheme of its own popularly called by the name "Colon Classification" Enormous research is being done in the classification scheme and its concepts of Facets, Phases, Five Fundamental Categories, and Postulated Approach, and Indian researches is creating world wide interest among the leading classificationists of the world It is hoped that in due course the Colon Classification may be universally acclaimed to be the best scheme known so far and may be adopted all over the world for the work of documentation and bibliography Presently practically all the International Organisations of Library Science like F I D, I F L A and the Library Research Organisations in Great Britain and U S A are studying the possibility of using the Indian Scheme of Classification and particularly its Facet Analysis in connection with the development of Codes for use in the mechanical and electrical devices for the selection of scientific information.

41 SYMBIOSIS BETWEEN CLASSIFICATION AND CATALOGUING

Before 1935, the year of discovery of the Chain Procedure for finding subject heading for the Library Catalogue from the Class Number of the book, no relationship existed between the two branches of Library Science namely Classification and Cataloguing The two were regarded as quite separate disciplines and developed independently without any relationship and co-ordination between them

India's pioneering work of Dr Ranganathan in the field of library science established a symbiosis between library classification and library catalogue by the method of Chain Procedure Symbiosis is reciprocal dependence i e where one fails the other comes to its rescue This fool-proof mechanical method of finding subject heading by Chain Procedure is being adopted in several Indian libraries as well as the libraries of foreign countries specially Great Britain The British National Bibliography is making an extensive use of the concept of Chain Procedure

42 FEATURED CLASSIFIED PRESENTATION OF ENTRIES IN CATALOGUES AND BIBLIOGRAPHIES WITH ALPHABETICAL INDEX

Ranganathan's development of Classified Catalogue on scientific lines and his practical demonstration of its advantages over Dictionary Catalogue in his bibliography *Union catalogue of learned periodical publications in South Asia* (India Library Association, 1953) has convinced the world of the utility of classified presentation of entries with alphabetical index and it can be said safely that owing to India's influence the British National Bibliography is featuring its entries in a Classified sequence with alphabetical index

43 PRENATAL CLASSIFICATION AND CATALOGUING

There has always been a great time-lag between the receipt of books in the library and their release for use This has been due to the time required to classify and catalogue them This hold-up of books is a source of constant worry to librarians. Various methods have been suggested by librarians of different countries for reducing the time-lag India's suggestion, coming forth from Dr Ranganathan on August 12, 1948, in his address at the Library of Congress, created the concept of Prenatal Classification and Cataloguing This concept envisages the release of Catalogue Cards along with the release of the books themselves, the printing of the Call Numbers on the backs of the title-pages, and tooling them on the binding Therefore, the residual routine for preparing a book will make it possible for a library to release a book within not more than a couple of days of its receipt. It is hoped that the progressive nations of the world like Great Britain and U S A will act on the path shown by India in this direction and thereby serve the cause of libraries more efficiently

5 Job Analysis, Simplification and Standardisation of Library Procedures

India's contribution in analysing the various library jobs and suggesting simplified standard methods and procedures for libraries has been of great importance Dr Ranganathan's book *Library Administration* 1945 and 1958 and articles on library administration in the *Abgila* and its successor the *Annals of library science* by S Ramabhadran are pioneer efforts in the field of library administration The ideal Three Card System suggested by Dr Ranganathan for the maintenance of periodicals records in any library is an entirely new concept to the library world

51 STANDARDISATION OF LIBRARY SUPPLIES AND EQUIPMENT

The setting up of a separate unit on a Governmental level for carrying out investigations, experiments, and studies for finding out standards for library supplies and equipments is decidedly India's step ahead of any other progressive countries of the world in the field of the Library Science. The work of the two sections of the Indian Standards Institution, New Delhi with Dr Ranganathan as Chairman has been a pioneer effort

52 REDEFINING PHYSICAL BIBLIOGRAPHY FOR LIBRARIANS

The subject of Physical Bibliography was being taught to the Librarians hitherto without any relevance to the nature of the work librarians had to do in their libraries No attempt was made outside India till 1952 for teaching the subject from the librarian's point of view. It was due to Dr Ranganathan's effort that Physical Bibliography was redefined for the first time It was in this book *Social bibliography or physical bibliography for librarian* that the subject was dealt with keeping the Librarian's interest in view

6 Teaching of Library Science and Research

India's contribution in making the study of Library Science possible by scientific methods based on the concept of Fundamental Categories, Laws and Canons and the separation of work in the idea, verbal and the notational planes has made the technique of teaching the subject more versatile than it was in the past It makes it possible for the needs of different levels of learners to be met with equal efficiency without undue strain. It has opened new fields for research in Library Science and has lifted the tone of teaching the subject It is mostly due to India's effort that new avenues for research work in this subject have been opened. These new avenues open up the possibility for the universities in India and elsewhere to provide for Doctorate Degrees based on research work in the substance of Library Science.

A series of articles appearing in the *Abgila* "Teaching of Library Science" from March 1953 onwards point out the need for adopting new teaching techniques in Library Science. These articles show also the methodology of teaching the subject and the need for full-time posts to teach Library Science

61 LIBRARY LITERATURE

India has enriched the field of Library Science by contributing a vast amount of literature in the form of books, periodicals, and pamphlets About 100 books out of which about 48 are by one single author *i e* Dr Ranganathan cover practically all the diverse branches of Library Science

7 Model Library Act

India has presented Model Library Acts for the States and the Central Government for the smooth and efficient running of libraries in the countries The various clauses of these acts as given in the book *Library development plan*, 1950 by Dr Ranganathan are under study in foreign countries, and they too feel the need of incorporating certain clauses suggested by India in these Library Acts so as to make the act more practical and workable

8 Raising the Status and Salary Scale of Librarians

India's efforts in raising the status and salary of practising librarians is also praiseworthy. On the recommendation of University Grants Commission, the posts of librarians have been put in all universities on par with Universitv Professors and Teachers Through the efforts of Local Library Associations the salaries of the Librarians of several public and special libraries have been put on a par with other Government officials of similar qualifications By awarding the title of *Padma Shri* to an Indian Librarian in recognition of his meritorious services to the country, India has raised the prestige of the Library Profession in the eyes of the world; and people have started looking on this profession with more regard and respect.

9 Conclusion

Thus looking at the development and progress of the subject of Library Science during the last two decades, we feel proud in saying that India has contributed quite substantially to the world of Library Science in developing the subject along logical and scientific lines Like some other subjects e g Physics, Astronomy, Mathematics etc, Library Science is also a field for which several advanced countries of the world are looking to India for a lead and guidance in solving their several baffling problems It is hoped that the "future" generations of librarians will keep up the name, fame and prestige that India has won in the eyes of foreigners for brilliant contributions in the subject and that the Sarada Ranganathan Chair of Library Science will produce some outstanding scholars whose contributions in the subject will be a beacon of light for the future generations of librarians.

CHAPTER T7

Dr Ranganathan's Contribution to the Library World

H S HINGWE

1 Father of Indian Librarianship

WHILE Mr R C Swank's paper entitled as the "Help We Give", was being discussed at one of the seminars of librarians, arranged under the joint auspices of the University Grants Commission and the India Wheat Loan Educational Exchange Programme, a question was posed whether India has given anything original to the profession. Greatly astonished by the ignorance of the poser of the question, I answered "Certainly, it has. India has contributed so profusely to the library profession and its credit, to a large extent, goes to Dr S R Ranganathan, better known to the library world as the 'Father of Indian Librarianship.' "

2 Contributions

Dr Ranganathan's contribution to the library world is not only vast and varied but is original, as well. In the capacity as a teacher of the library school, as the writer of scholarly books and articles on library science, as the President of the Indian Library Association, as the Chairman of the Library Advisory Committee of the University Grants Commission, in the capacity as the Chairman of various international bodies, Dr Ranganathan has contributed his mind, health and wealth only to the betterment of library profession, within and outside India.

3 Unique Position

We have heard of Bliss and Dewey, Panizzi and Lubetzky, Cutter and Sayers and their monumental contributions to the library profession. Dr Ranganathan is the only Indian librarian who could be ranked along with the above stalwarts. He, however, holds a unique position in the "array of above mentioned experts". His contribution to the library literature is so varied, vast and original that he can hardly be equalled by anybody else in this respect.

There is no subject relating to library science on which Dr Ranganathan has not written authoritatively. He has written scholarly and practical treatises on library classification, library cataloguing, library administration, book selection, reference service, library planning, library organisation, library training and documentation. What is more important is this that he has not remained satisfied by bringing out books on the above referred topics but his research in these subjects is still being conducted even today and its results are being regularly published in the *Annals of library science.* Although Dr Ranganathan has written scores of books and hundreds of articles on library science, he is better known to the library world because of his "Colon Classification" and "Depth Classification" His "Five Laws of Library Science" proved the basis of library technique Before 'Panchasheel' appeared on the world state Dr Ranganathan's *Panchasheel* in the form of "Five Laws of Library Science", became the most universal and powerful force that stabilized the foundations of library technique, at least in India "Five Laws of Library Science", writes Mr Sayers, "is a work of great simplicity which conceals depths and yet reveals what may be called spiritual but intensely practical springs of his activity"

4 **Colon Classification**

His famous 'Colon Classification' is based on the Canons of classification enunciated in his *Prolegomena to library classification* Experts in the field have described his *Prolegomena* as "a most precise, theoretical, practical and comparative exposition of library classification theory that, while it acknowledged the influence of Bliss's two well known books on the Organisation of Knowledge, was still intensely original Its arrangement is masterly, its scope enormous, its contribution invaluable" Like *Prolegomena to library classification* his *Elements of library classification* and *Library classification Fundamentals and procedure* have formed the basis of his "Colon Classification"

41 EXPOSITION OF THE COLON CLASSIFICATION

His Colon Classification is known to the world as an analytico-synthetic scheme of classification". Six editions of this scheme have come out since 1933, and Dr Ranganathan's research in the field might add some more editions in the course of time The Colon Classification differs from other schemes of classification in the sense, that it does not provide ready made numbers It provides schedules of knowledge classes and rules that formulate Call Numbers The author of the scheme, although, has been able to finalise the five fundamental trains of characteristics, such as Personality, Matter, Energy, Space and Time the Main Classes in the Colon Classification are being increased from edition to edition. The merits of the Colon Classification can be judged not only on "ideological plane" but on "practicability and utility plane". Mr Berwick

Sayers who has written the preface to Dr Ranganathan's *Prolegomena to library classification* has given a very balanced and critical view on the "Colon Classification", in his famous book known as *Manual of classification for librarians and bibliographers*

5 Cataloguing

Dr Ranganathan's contribution to library cataloguing is equally unique and original His *Theory of library catalogue* and *Library catalogue · Fundamentals and procedure* could be considered as the foundations of his Classified Catalogue and Dictionary Catalogue His *Headings and canons* is perhaps the most authentic source to those interested in making a comparative study of five catalogue codes Mr S Parthasarathy (Insdoc, New Delhi) very aptly describes Dr Ranganathan's contribution in the field of library cataloguing as follows

"It will be worthwhile to enumerate some of the contributions from India They are mostly the work of Dr Ranganathan and his associates His contributions in the field of cataloguing has been considerable and unique He built up a new code—a *Classified catalogue code* on a scientific basis. He demonstrated how *Classified catalogue code* was a more evolved code. He formulated a set of basic principles and canons of cataloguing He analysed ruthlessly the basis of existing codes and spotlighted their shortcomings He gave a scientific explanation for the preference of a surname as the leading element of personal name entries in the case of Western Names He also showed how the 'Surname' concept was not universally applicable, particularly to Asian names All these problems have been touched upon in his *Headings and canons*

6 Influence on World Librarianship

The influence of Dr Ranganathan's writings on the study of classification and cataloguing has been rightly described by Mr J Mills as follows "The influence of Dr Ranganathan on the study of classification and cataloguing is more than the result of tireless investigation of, and prolific invention of solutions to, the complex problems associated with the subject, it springs also from his clear awareness of its proper relations to the rest of the librarian's studies and to the bold and the graphic language which reflects so happily his own infectious enthusiasm "

61 DEBT TO INDIA

The credit of giving right directive to the compilation of the *British national bibliography* also goes to Dr Ranganathan Mr A J Wells in his article, "Our debt to India" writes: "Indian readers from the brief account about the principal features of the *British national bibliography* know how much is owed to the work of Dr Ranganathan. His theory of classification is at the very heart of Britain's newest undertaking in the field of librarianship We of the *British national bibliography* are pleased to acknowledge our debt to India and in particular to Dr Ranganathan by whose work and inspiring friendship we have progressed to a new conception of the Classified Catalogue"

7 A Great Teacher

As a teacher, Dr Ranganathan deserves all laurels I had the good fortune of attending his lectures for one full academic year at the Madras University He has a special knack of making his lectures very interesting and lively Full of wit and humour, enriched with varied and detailed information on the subject concerned, his lectures proved a great source of inspiration to his students Dr Ranganathan has never been a passive teacher He made his pupil work very hard and today through his pupils spread all over India Dr Ranganathan is still giving right directive to the Library profession. As an ex-president of the Indian Library Association Dr Ranganathan has made substantial contribution to the library profession in India By his dynamic and resourceful personality he infused life in the affairs of the Indian Library Association and gave it financial stability

8 Unique in Everything

With the help of his student librarians, Dr Ranganathan, even at this age, is conducting fundamental research in various aspects of library science If you refer to any issue of the *Annals of library science*, you will find the variety of subjects, on which Dr Ranganathan is writing scholarly articles In the capacity of the Chairman of the Library Advisory Committee of the University Grants Commission, he is responsible, mostly, for bringing out a report, that has proved a source of guidance to all university and college libraries in India In the field of documentation, Dr Ranganathan's contributions have been acclaimed all over the world His Depth Classification has enabled the librarians to classify even the micro-thoughts to any extent By giving his life time income for creating a Chair in Librarianship in the Madras University, Dr Ranganathan has made a crowning contribution, unparalleled so far as I know, by any single professional librarian, to the library profession

Librarians all over the world ever remain indebted to this great architect of Indian Librarianship and on the occasion of his seventy-first birthday pray to God to give Dr Ranganathan long life

CHAPTER T8

Nothing about Ranganathan

UMESH DATTA SHARMA

0 Dawn of Library Science

NINETEEN twenty-four is the harbinger of thinking in Indian librarianship. Dr Ranganathan was visiting various British libraries. Divergent practices of British libraries took him far from what he was taught in the library school. This scene had made a profound impression upon Ranganathan. He thought what it was that caused librarians to hold divergent views and to torture the profession for these divergencies in their views. Since then, being painfully conscious and aware of the fact, the young man of Shiyali had concentrated himself to a life of investigation. As he grew older he plunged into the study of library science—the science of the moderns. And he steeped himself especially in the great thoughts of the ages. He distilled through the alembic of his analytical mind not only the philosophy of librarianship but the scientific methods in this branch of knowledge. In order to extend his horizon in the world he took up the systematization of classification. The result was the evolution of Colon Classification. He also embarked on creating new discipline in several branches of library science.

Ranganathan was now completely transferred into a thinker librarian, whose ideal was to be all through realistic.

1 Study of Ranganathan

In the meantime his heterochromatic ideas had reached the West and were admired first by his teacher the late Berwick Sayers. But admiration was not only the sole reward for his profound work. Contempt was also there which sprang up in the hearts of many. And this has also been one of the ways of understanding Ranganathan. He always kept himself busy in the devotion of the aristocratic creed of sportsmanship of brains rather than of brawn.

2 Immortalised Ranganathan

And even today, he polishes his lenses and devotes his time in thinking and writing about the meaning of library science and its relation to human life.

With universe in his idealism, human-being in his concentration, service in his foundation and library science in his faith, speaks Ranganathan, "I can take any number of births for library profession"

3 **Philosopher Ranganathan**

Ranganathan, like other thinkers, was vitally interested in three questions·
1 What is a library science ?
2 Why it exists ? and
3 How to tackle it ?
In order to find an answer to these three questions he set out to examine
1 the universe of knowledge,
2 the nature of reader and the book; and
3 the libraries

The universe of knowledge, observes Ranganathan, is infinite It has no beginning in *space*. For argument's sake, if we project in imagination to that beginning and look beyond it, what do we find ? Nothingness ? But nothingness is inconceivable Hence there is something beyond our imagined beginning—an infinite stretch of the universe of knowledge that extends past the farthest imaginable horizon of human thought In like manner we can establish the fact, asserts Ranganathan, that the universe of knowledge has no end in *space* Furthermore, the universe of knowledge has no beginning and no end in *time* So the universe of knowledge is eternal

In this universe of knowledge the natural sciences, the social sciences, and the humanities, indeed all the divisions of knowledge, are nothing but a few grains of knowledge swept together into an obscure little corner of the universe of knowledge And what we call our universe of natural science, or humanities —is a classified division of knowledge in the infinite body of the whole The number of universe in every such division in extended universe which we call *the whole* is infinite in number, just as the universe of knowledge itself is infinite in *space* and *time* There thought Ranganathan on the lines of Spinoza and picked the concepts of space, time and whole The next question is why this library science exists ? The answer is to study the nature of the reader and the book To this question Ranganathan gives a unique and surprising answer He has categorized the types of readers—shy, traumatic etc, and has suggested the ways to handle them accordingly But a book comes before him as a trinity of body, mind, and soul—the physique, the language and the thoughts

4 **Brain of the Profession**

In his examination of nature of libraries, he answers the third and the last question by taking a library as the trinity of a reader, a book and a librarian Technical solutions to professional problems is another aspect of his answer to the last question He attempts to mobilize the universe of knowledge towards utility through libraries He is, thus, the intelligence that guides the profession and the profession that is guided by the intelligence

5 His Philosophy of Life

Undoubtedly Ranganathan holds fast the Aristotelian doctrine of self enlightenment "Our chief interest in life is to love ourself" This may sound like egoism But it is the height of altruism For, as Ranganathan points out, in order to love yourself you must love others Love, pleasure, happiness—these treasures of the soul are best enjoyed when most generously shared. He further amplified the idea and applied it to modern life The wise librarian, asserts Ranganathan, knows that he can help himself by helping others. He realizes that individual happiness is mutual happiness. And this seems to be the backbone of reference-service in the library profession

6 What of Ranganathan

Such is his contribution to the profession And this contribution through his deep thinking in Library Science has given him several adjectives like "Philosopher Librarian" or "Mystic Librarian" or "Delta-Librarian" Delta, the symbol for spiritual sciences in Colon Classification covers mysticism also These adjectives prove that Ranganathan's thinking has developed on a logical base And to these honors he gives a universal smile as if revealing the mysteries of library science

7 Nothing about Ranganathan

As I see it—all this account is but nothing about Ranganathan For he knows well that

य हि न व्यथयन्त्येते पुरुष पुरुषर्षभ ।
समदु खसुख धीर मोऽमृतत्वाय कल्पते ॥

(*Gita, Chap 2, Shlk 15*)

"The soul which is not moved,
The soul that with a strong and constant calm
Takes sorrow and takes joy indifferently,
Lives in the life undying !"

(*Translated by Franklin Edgerton*)

CHAPTER T91

Diary Leaves Afloat

C V Subba Rao

1 Teaching of Library Classification

THAT was the class in Library Science. Examinations were nearing and in a few weeks' time the students would be steering libraries independently. All the classification schemes were surveyed and Dewey Decimal Classification in detail. U D C was rounded off in a couple of lectures. An imprudent student questioned about not being introduced to Colon System on which a question was inevitable in the examination. Two more classes were taken on classification. It was a reluctant discourse by one of the eminent scholars in classification, mostly dealing with a comparison of U D C, placing in juxtaposition coined examples of C C.

'Too much of scientific terminology', 'too many schedules scattered in too many books', 'U D C is a very good alternative even if Colon is good', are some of the remarks often repeated. Many were not in a position to view it coolly nor was there enough time to undertake private study. As a result, a prejudicial opinion of Colon system was rooted, even without good comprehension.

2 Working of Library Act

I was working full-hearted with all youthful energy to build a good Library for Kurnool public. That was the age which trampled on all obstacles in blind optimism. Slowly it was obvious that the deficiencies in the Madras Library Act are the shackles that will cripple many young men for all future. The unconcerned way in which State Library Committee disposed of its agenda, infused no hope in the heart of any district Librarian. In fact the Department had a grouse against all young librarians who were never grateful for eating the salt of the Government and looked to a Law higher than it believed.

At this stage, I had the occassion to read in *Library legislation* the portion on Madras Library Act. 'How true' resounded in my heart. The criticism of the Act is beautiful but the 'Five Laws' were better not said lest it be elementary school teaching. What other opinion could I arrive at, with an initial injection of prejudice.

3 Contribution in India

In a few years, having some other burdens which I had to respect, drifted me into the Central Government service. Not even half the work I did in the State Government was there to do, but I was paid thrice Utilised the leisure well in going through many current numbers and back volumes of library science periodicals stocked in the University Library Felt inspired and depression was driven away Those few writers who made substantial contributions to library science in India were all Dr S R Ranganathan's students either at Madras, Banaras or Delhi This man was a good teacher, who could inspire young men and I saw them struggling hard for the recognition of the profession A desire took root in me to listen to this Teacher and even in a few months imbibe his Life's message

4 Experience of a Teacher

At Calcutta even when fates turned against me, I clung steadfast to the truths I should uphold The back volumes of library science periodicals left an inspiration and titled the scales for a long-drawn struggle Wrote a couple of articles on maps and geographical place names My plans of reading Ranganathan are to materialise now, I said to myself Approached a friend of mine and a student of Dr S R R to teach me Colon On the 'Man' we had discussion but when it came to the subject, he slipped away saying that he knows how to give Colon Numbers but not to explain them to a fellow like me, who would question and cross question Inspite of a good teacher I learnt that there will be pupils who will make use of the learning to earn their livelihood, and care two hoots for the science as such It spells danger for this infant profession

5 Self-Education

Met several senior librarians Astounded to hear that their grounding in Colon was as good as mine Hence determined to go it alone Battled with *Prolegomena* for a month full It would have won my patience had I been even a bit meek And proceeded to understand Colon Classification itself Realised that a teacher's guidance was absolute here Even hazarded framing of numbers. Could succeed in 50% of cases, but could not explain why I failed in the other half No help anywhere available I should postpone a thorough study of it to some other day

51 ATTEMPTS AT WRITING

Turned to writing articles on topics that came in my way in library science, which needed study only, but no guidance My inability to understand Colon

Classification was repeatedly examined. Some of the criticisms advanced earlier returned to me Since I differed from the prejudiced opinions, what new reasons can be assigned to my inability ? The bold paragraph headings, the decimalised numerical ladder, the two sentence paragraphs and half-a-page chapters, are certainly an obnoxious form of writing Wrote them out in the form of an article Some were positively glad, others looked suspicious at the audacity of this egg in challenging the Hen After all I knew myself and was different Somehow picked up courage to send a copy to Dr Ranganathan who alone could reply to my reasoning. I was honest in my thoughts, free from hatred, but how can he understand all my feelings and not mistake me as a cock on the Dung Hill ?

52 REPLY TO THE LENGTH OF A PAPER

Reply is as lengthy as my paper Good reasoning but some sentences could be interpreted as aspersions I was convinced that S R R's way had a justification but neither my way was nay weaker Just because of Dr S R R replies should I lie flat and give up my reasoning as a mark of respect to a Great man ? No I defended my thesis A second reply came exonerating me

6 Classified Catalogue Code

Came across the *Classified catalogue code* while trying to understand the pattern of Indic names It is the very first code of its type going to the depth of the issues whether it be a method of cataloguing or setting ideal rules or standard Though some of the articles in *Abgila* and *Annals of library science* realised how much field-work and crystallised thought went into this code, which the author calls in an amazing humility, a journey of 'approximations' through years CCC and CC are the twin inventions of Dr S R R

7 Library Administration

His *Library administration* is a compendium of office procedures, forms, estimates and requirements It should be the convocation present to every library science student Young men go with a philosophy to the job, but the job itself calls for mastery of the tiniest of the detail, without which the offices will be run by clerks On every aspect and on any issue of Library Administration here is a reference book which will never fail

8 Hard Dedicated Life

Dr S R R is extremely cool headed, and embarrassingly calm when those who differ from him are violent Not the man but the path of thought he analyses with a sincerity of reasoning He is himself a product of dialectics and grew in strife as is evident from the pages of the *Modern librarian* and the *Indian librarian*. His Library Acts which are slowly adopted by one State after another of the Indian Union, and the conference of *Padmashri* are a recognition of his services in India The institution of Insdoc and INB are the fruits of his thought. This gentleman at 71 and under-diet travels to all corners of India full of plans for the future If I live to that age, I wish God would bless me with half the strength.

91 Great Benefactor to Library Science

The history of new subjects that emerge is strange. Prof Mahalanobis vowed his allegiance to Physics for 25 years but by a will and an effort got a place of Honour and established Statistics in India. Dr S P Chatterji is a trained Geologist, and Geography was his second love Yet he had to lead the Indian Geographers and pioneer the National Atlas of India Dr SRR is a Mathematician. We are fortune he has won a recognition for Library Science It is men removed from the ordinary and propelled by a force within, that make such headway. Here we have all the three scholar-administrators, a boon to the Nation With due respects to the rest, it is the proud privilege of the Library Profession to possess one, who could give from his life's savings denying even the elementary comforts to himself a lakh of rupees, for the betterment of his subject.

92 Rich Deposit of Virtues

I know not much about his frailities He is a distant pen-friend His promptness will be the envy of even businessmen. The richest of the ores is an alloy But he is a rich deposit of virtues among Men of his generation A little intolerance at mediocrity and a strong dislike of doubtful ways, are some of the grave objections I hear Let them rest in the balance before the Lord for judgement To the mortal eye his assets out-weigh his debits

93 Successors of Dr Ranganathan

I do not think twice to seek his guidance on any technical matter We the young men examine our elders very closely I have collected many Don'ts for myself Shall I mention No 1 of it ? Do not occupy a place or aspire for it unless the talents you have are a match to the duties Much frustration in aspiring for promotions and not getting them, or frustating talented juniors because of vested interest in occupying the position, can easily be avoided. A generation of worthy successors to Dr SRR cannot but be missionaries of new values strange in Indian Administration

CHAPTER T92

Grand Old Man of World Librarianship

P C GOETZEE

1 Pioneer of Library Work

SEVERAL South African librarians who have been overseas in the past few months, have had the privilege of meeting the most distinguished figure in the history of modern librarianship, Dr Shiyali Ramamrita Ranganathan. At the age of 71, this pioneer of library work in India is still professionally active and playing an important part in developing a theory of librarianship based on scientific and philosophical principles.

2 Monumental Festschrift

His colleagues from all over the world are at present collaborating on a monumental Festschrift. A Ranganathan Commemoration Volume Committee has been formed under the Chairmanship of Mr M Ananthasayanam Ayyangar with members from many countries in Europe, America and Asia, South Africa being represented by Miss Jean Greybe and others. Numerous papers have already been received by the Secretary of the Committee, Mr P N Kaula. These papers, dealing with all aspects of librarianship, are being published as Volume 1 of the *Festschrift*, while a complete bibliography of Dr Ranganathan's publications will form a Second Volume.

3 Contributions of International Significance

Dr Ranganathan has written on practically all aspects of library work. Many of his books have been handbooks for library science students and practising librarians and these have been instrumental in the forming of the library profession in India. His contributions on the theory of subject cataloguing and active documentation have an international significance. He must indeed be regarded as the *originator* of an entirely new development of this branch of librarianship, namely the technique of Facet Analysis, and as the founder of what may be termed, the British School of Facet-analysts. The work of this school of documentation is at present receiving attention from all interested in the retrieval of information and has already an important influence.

4 Chain Indexing

He is also known as the inventor of the method of Chain Indexing which was in the first place intended as a more or less mechanical way of producing entries for the subject index for a Classified Catalogue. The theory of Chain Indexing has however significant implications for forming "*see also*" references in a Dictionary Catalogue

5 Original Thinker

It is no exaggeration to say that Dr Ranganathan has revitalized modern thinking on the subject of cataloguing. His name will be remembered in the history of librarianship with that of Dr Hans Trebst of Dresden (who unfortunately died before completing his theoretical work) as those of the most original and stimulating thinkers on this important topic

CHAPTER T93

Dr Ranganathan : An Inventive Genius

S BASIRUDDIN

1 Dedicated Life

DR Ranganathan's name is a household word in library world everywhere in the world. His greatness among librarians is admitted by all. The publication of the *Festschrift* on the occasion of his 71st birthday is a testimony to the eminence he occupies in the profession. Not only among the librarians, but also among a large circle of educationists in the country, Dr Ranganathan is held in esteem. Those who have come into personal contact with him, are impressed by the agility of his mind, by the sweep of his grasp of professional knowledge and by the missionary zeal with which he has devoted his life to raising library techniques from the empirical stage to the scientific level. Truly no one before him has grappled with the problems of technique of organising the library as Dr Ranganathan has done during the decades he has devoted to the task.

2 Secret of Greatness

All this and much more can be said and written about Dr Ranganathan by those who have had the privilege of being his contemporaries in the profession; but the question may be asked, wherein does his greatness lie ? Is it by virtue of the massive literature he will be leaving behind that he will be known as great ? Or, is it by the system of book classification he has evolved or by the ceaseless campaign he has carried on for popularising the library movement in his country or by the impact of his personality on the generations of our librarians since he founded the School of Librarianship in Madras well nigh 40 years ago ? Surely he will be known by all this and be remembered for many a long year for his unique contribution to the cause of library organisation. And yet his greatness transcends everything enumerated above. As I have known him and watched his activities for well over 30 years, I have felt a spark of genius in him. Like many ordinary practical men he felt dissatisfied with the methods followed in the organisation and administration of the library. But like a man out of the ordinary, Dr Ranganathan had the vision to conceive a comprehensive plan for revolutionising library practice in all its branches. Dr Ranganathan came to the profession with the outlook and approach of a scientist. Indeed it may be permissible to speculate that his shift from mathematics to library profession was a loss to his first love. In all he says and does, one perceives a mind endowed with a scientist's acumen, penetration and power to synthesise. His mind works like a rapier and reaches conclusions which it would take an ordinary individual endless efforts to arrive at. His vision is not that of a mystic but that of a scientist. The vision he sees, he translates into concrete reality with the scrupulous care of a scientist and the fineness of an artist.

3 Inventive Genius

Nothing that cannot be tested on the anvil of actual practice is acceptable to him. Few are aware of the perseverance that lies behind the discovery and enunciation of all his contributions, fewer would know that for years on end, he was fed by his mother or wife so that his hands could be free to put into black and white the flow of ideas that came like a fountain that never exhausts itself. It was through such discipline that he raised librarianship to the status of a discipline equal with the other disciplines. Ranganathan's is an inventive genius and his greatness lies in this aspect of his personality.

4 Marvellous Teacher

As a teacher Dr Ranganathan has inspired and produced a galaxy of young librarians who have dedicated themselves to the extension of the boundaries of the science of librarianship with equal zeal. An unique—shall I say a mystifying fact about Dr Ranganathan as a teacher is that his pupils' relationship with him is often that of a votary to a *Guru*. And herein one suspects danger in the progress and developments of library science. Like a genius, Dr Ranganathan aims at perfection. Shoddiness and clumsiness are anathema to him. He is equally suspicious of deviation. In lesser individuals such an attitude is prone to assume an aspect of regidity and intolerance. One apprehends, therefore, when one encounters such reactions in his pupils, that a personality cult may not afflict the profession in India as a consequence. Often and again I come across instances when doubtful of soundness of a certain practice, I want to be corrected. The reply I invariably get is, "Dr Ranganathan says in his ” On further inquiry I discover that the fault does not lie with what Dr Ranganathan says but with its wrong application. A spirit of enquiry and readiness to reform, when found wrong, are qualities rarely found among the younger generation. Dr Ranganathan has inspired them to great heights of investigation and research, the contribution his pupils can make is not to be content with what they have received from him but to march ahead in search of new ideas.

Long live Dr Ranganathan !

PART U

EVALUATION (WORKS & LIFE)

CHAPTER UI

Ranganathan : A Study

P N KAULA

0 Initiation into Librarianship

MAN is a tool in the hands of destiny. However much a person may struggle hard to achieve an objective, the result of his efforts is ultimately not always within his hands. Providence wanted me to be a librarian in spite of the fact that none of the citizens of my state had ever attempted to think about this career, some eighteen years back. Providence not only induced me to be a librarian, but also helped me to discover myself. Little could I imagine a few years back that destiny would provide me an opportunity to serve the library profession within my normal capacity. Little could I imagine during those days that there would be a tremendous opportunity to work in a profession not cherished by any one in Kashmir, to which I happen to belong. Eighteen years of work in the profession has entirely changed my out look of life, my ideas of happiness, my mental faculties, and above all the purpose of my living. I was brought from a wilderness into life; and from darkness into light; and I was put on to a path which has now become the mission of my life. My life would have been certainly different, if destiny had not brought me in contact with a librarian who has profoundly influenced my life in every way. That librarian has similarly influenced the lives of several other persons. In fact, he has not only influenced the man who came in contact with him in person, or who came under the spell of his influence through his classical writings; but he has also influenced the library thought of the world in general. That librarian who is now regarded a multifaceted genius in library science, and the Father of Library Movement in India, is known as Dr Ranganathan.

01 PILGRIMAGE TO SOUTH

It was July 1945 when Providence brought me to Madras to get myself trained in library science at the Madras University under Ranganathan. I had heard about him and had seen some of his works too at the D A V College (Srinagar) where I happened to start my career of librarianship in March 1944. The urge to get myself trained under him in spite of the training courses being available at Lahore (then in India), Banaras and Bombay was deep in my mind. Lahore had a part-time course of six months and it was very near to Kashmir. But the urge to have my training under Ranganathan made me leave my home for Madras as a pilgrim on 22 June 1945, without even having received any intimation from the Madras University about my admission to the full-time one-year course A lad of 21, leaving his home for the first time, and not having received the intimation of admission in the face of the politics prevalent in Madras, was a very risky adventure, but it was definitely a pilgrimage to obtain a new light and to attain a new life. The pilgrimage is undertaken in India generally from South to North and not the way I had undertaken The pilgrimage has been successful

02 STRANGE RECEPTION

On 30 June 1945, when I reached the Madras University Library after exposing myself to the blazing heat of June during the seven days of journey, I was met by the then Acting Librarian in the University whom I took to be Ranganathan He told me that I had been admitted to the course with difficulty, the reason I found later was that Providence had borne me out of a certain class of parents. He asked me why I came to Madras when training was available at Lahore and that too part-time for only six months. I frankly told him that I had come to get myself trained under him He asked me how I knew him I said, "Through your works" He immediately flared up, to my utter surprise, and said, "You mean Ranganathan ! You will be disappointed to hear that he will not be teaching you I am not Ranganathan, Ranganathan has retired"

03 STRANGE POLITICS

Being dismayed at this rebuff, I had the urge to see Rao Saheb Ranganathan as he was called during those days But unless his residence was known to me I could not go to him I asked the staff of the library to let me know his residence I was doubly puzzled when everybody in the staff refused to divulge his address After a week's persistant effort and having understood the dismal politics enveloping that Library, I was fortunate to get the address from one of the Reference Assistants who later occupied the chair of librarianship at the University of Delhi He took me into his confidence and gave me the address stating that I should not divulge this secret to any body within the library He also asked me to write the address in my own handwriting lest the slip, if slipped, may not endanger his service in the library In the classes too, the Acting Librarian would refer to my first conversation with him very ironically. Why this hatred; I wondered?

04 FIRST CONTACT

Thanks to the then Reference Librarian, I started that very day in rains that come usually in the evenings to locate the residence of Rao Saheb Ranganathan and to meet him I reached 15 Sami Pillai Street, Triplicane and knocked at the door. The door was opened by a lad in his teens who happened to be the son of Ranganathan—T R Yogeshwaran. After asking me who I was, he called his father and said," Appa ! A student of library science has come from Kashmir." On being allowed to go in and directed to the first floor, I climbed the steps and at the door of the room adjoining the staircase, I saw a man standing with only a dhoti on and that too up his knees only. Little could I imagine that he himself was Ranganathan I passed him aside, went a little further, and then turned round and asked him, "Where is Mr Ranganathan ?" "I am Ranganathan," came the immediate reply. I felt ashamed and tendered my apology for having mistaken him Having lived all along in the North, not having been out of Kashmir, and also having seen the Acting Librarian of the Madras University, my conception of Ranganathan had been altogether different. Ranganathan very humourously told me that there was nothing strange in my conception. He then called me in, perhaps to accept me as his student and not as a disciple at that time. Since that time, I have lived with Ranganathan, moved with him from Madras to Banaras and then to Delhi and grown under him

05 Pilgrimage to Banaras

Providence had something different for me I was not destined to complete my training at the Madras University. Ranganathan had received two invitations from the North, one from Delhi and the other from Banaras to come and organise their respective university libraries Sir Maurice Gwyer, Vice Chancellor of Delhi University, passionately wanted him to come to Delhi and Dr S Radhakrishnan, Vice Chancellor of the Banaras Hindu University, now the President of India, had requested him to come to Banaras. His preference was for the Delhi University to organise a Department of Library Science When I learnt about it, I decided to follow him Soon, however, Dr Radhakrishnan appeared in Madras and persuaded him to come to the "National University" saying that Delhi could afford to have even a foreign expert while Banaras could not So he should prefer to come to Banaras Ranganathan asked him whether I could be admitted to the training course at B H U, because the classes had already started Dr Radhakrishnan promised to do the needful Soon came the telegram from him from B H U, stating, "Kaula can join the course on usual terms and conditions " I therefore left the Madras University, in spite of my having paid the entire fee of the course In Banaras I had the opportunity of working very closely with Ranganathan and also acquired my very first lessons in library science from him

06 Attraction of Ranganathan

In December 1947, in spite of having become the Librarian of the Birla Central Library at Pilani with good emoluments and facilities, I decided to join the Delhi University Library as a Junior Library Assistant, on a lower grade and salary. The only satisfaction was to work under Ranganathan who had shifted to Delhi University in June 1947 Providence again helped me to be his student for the Master's Degree Course in Library Science in the very first batch in 1948 This gave me another opportunity for learning new lessons in library science from him

07 OPPORTUNITY TO WORK

From 1948 onwards, the opportunity came to work with Ranganathan in many different ways Library conferences, Indian Library Association, the *Abgila*, Unesco library projects, the Library Seminars; and the Library Research Circle were the forums for working intimately with Ranganathan, understanding him, and interpreting his ideas. I record these personal reminiscences to explain that Ranganathan has been my ideal from the very beginning and whatever little work I have been able to do in the profession, is entirely due to his teaching, inspiration, and guidance

1 **Master-Architect in Library Science**

Ranganathan is a Master-Architect in the domain of library science He is the inventor of a bibliographic scheme of classification, the only complete code for a classified catalogue, and several techniques of library work His chief contributions are the Five Laws of Library Science, Facet-analysis, Phase-analysis, Zone-analysis, Octave-notation, Group-notation, Seminal-mnemonics, Fundamental categories, Canons of classification, Principles of helpful sequence, Postulational approach, and several devices in classification, Chain Procedure and Canons for cataloguing in cataloguing, Three Cards System for periodicals in library administration, Library legislation and Library System in library organisation, Depth classification and Feature headings in Documentation, and Standardization of library techniques and of library buildings, fittings and furniture

11 CREATIVE WORK

Dr Ranganathan is perhaps the most prolific writer in library science This is what Berwick Sayers has recorded He is the author of 50 standard works, nearly 1,000 articles, and scores of library development plans Besides, he was the first to draft a Model Library Act which was published in 1930 and accepted by the Library Service Section of the First All-Asia Educational Conference (Banaras) A revised version of it was later accepted by the Indian Library Association in its 1942 Conference (Bombay) He has drafted library bills for almost all the States of India though only Madras and Hyderabad (of before 1956) could claim the honour of having passed them into Library Acts They did so in 1948 and 1955 respectively The plan for the establishment of a National Library and the Union Library Bill drafted by him as a member of the Government of India's Committee on the subject, were generally approved by the Committee in 1949 Though not yet implemented, they are still available for the country

12 LEADERSHIP

Ranganathan has been a teacher of library science since 1929. He was the first to start a regular post-graduate Diploma Course in Library Science in the University of Madras in 1915 and a Master's Degree Course and Doctorate in Library Science at the University of Delhi in 1947. It is entirely due to him that library science has become a subject of study and research His students are to be found in every part of the world Most of them have become his ardent disciples He is indeed a great teacher who has baptised his pupils—some of them have achieved international recognition and a few of them positions of rank and leadership in the library profession In this, his leadership is unexampled

2 Personal Life

21 AUSTERITY

Ranganathan's personal life has been astounding As stated earlier, when I met him for the first time in July 1945 at his residence, I was struck by the austerity of his life I failed to recognise him when his son asked me to go to the first floor to meet him A half naked person with only a dhoti on, sitting not on a chair but on a mat, with a plank of wood in his hand as a support for writing, engrossed in his writing or discussing library science and making any one near him understand the problems concerning the subject—that was the life he was leading A librarian of the Madras University had no furniture at his home ! I understand that he had no electric current also when I met him in 1945 He used to work under a kerosine lamp undisturbed by anything happening around him Even in Banaras and later in Delhi, he was leading a similar life of austerity Night and day, his seat was on a mat and sometimes on a deck chair

22 POWERFUL CONCENTRATION

221 IN BANARAS

In Banaras, I was stunned to see him working in the evenings during the rainy season when insects would not allow any person to work. Insects would fall on him, but he would remain unmoved. Mosquitoes would come to him but he would remain unaffected This shows the powerful concentration of mind that he had. Many called him in Banaras a 'mystic' This he did not like, for he was not a mystic He was merely a normal man wedded to his work, physically outside and mentally inside In Banaras he used to work in the library for long hours, early hours and late hours He organised the library single-handed Even today the teachers in Banaras, who had seen him working, are admiring his zeal, devotion, and indefatigable energy and mental acumen

222 IN DELHI

In Delhi again he created history by long hours of work and making others work as well C 6 Maurice Nagar was a temple for librarians and he, the embodiment of work and inspiration His concentration on work has been proverbial During the dark days of Partition when insanity spread in Delhi and Maurice Nagar was surrounded by the Indian army to protect the weak, Ranganathan was unmoved by the terrible fighting going on within half a mile from his home He would go on working without any interruption There are many other similar instances which can be cited to depict his powerful concentration of mind

23 IMPACT IN MEETINGS

Ranganathan has been a great influence in library and educational circles The members of these professions as well as others used to feel his impact in meetings, conferences and discussions His personality would dominate even in the company of veterans and able intellectuals The secret of it, as I discovered it later, was his advance preparation for all the eventualities in a meeting He would not attend a meeting without having gone through the agenda and the papers making marginal notes and comments Thus he would easily steal a march over the others who usually do not care even to see the agenda In argument it was difficult for anyone to score over him He would give his reasons and counterreasons, and would make atomising analytical approaches to convince those who differed from him

24 PUNCTUALITY

The punctuality of Ranganathan is proverbial He would not be late for any meeting In his office life, he was the first to enter the library and the last to leave it In Delhi especially where he had to attend several meetings in New Delhi at a distance of seven to eight miles from his residence and depending on an inefficient public transport, Ranganathan was never late in attendance. He would wait for the bus like others but while others would miss the bus, this man would reach the place of his appointment even a few minutes before the appointed time

25 PROMPTNESS IN CORRESPONDENCE

In correspondence too, he is meticulously prompt. A letter received today would be replied the same day There is no '*Kal*' (Tomorrow) with him. When he would be absent from his residence either on tour within the country or outside the country, his *dak* would get accumulated and the very first day he reached home, he would answer each one of the letters that very night, sleep or no sleep. In each of his letters, he would always mention his address at the top and I remember how he pointed out the deficiency of others in not writing out their addresses on the letters sent to him He analyses all the points in a letter and replies them point by point serially or in decimal fraction notation A large number of letters to be written by hand, in answering their problems, is a huge piece of work Another person in his position would have engaged a private secretary to do it Even the replies to letters from abroad, he would write in his own hand, which he says is not quite legible. Those who have got accustomed to reading his hand can decipher his writing very easily. And remember, he writes a short essay in a post-card and a long introduction in an air letter. An ordinary person would use a magnifying glass to read it, but Ranganathan would write in that way just to save space and to make the maximum possible use of the material that he would use for writing

3 Unique Methodology in Teaching

Ranganathan has been a teacher of library science since 1929 He was the Head of the Department of Library Science at the Madras and Banaras Universities and Professor in Library Science at the Delhi and the Vikram Universities He has recently founded the Documentation Research and Training Centre at Bangalore to train documentalists and is its Hon Professor Most of the librarians in the South, West, and North have received training under him These librarians—one and all—have become his ardent disciples on account of his rare qualities as a teacher He would make every student work very hard and the students would enjoy it.

31 IN BANARAS

In Banaras, I know he used to take classes for several hours together, make us work, and answer the questions posed by him He was not a teacher of the kind we usually find in universities No dictation of notes, no lecturing from prepared text, and no unbriddled speech His class was a forum for discussion where each person had to speak and contribute. Even the dullest student would not be left to his fate His ideal was to make a dull student bright, a dumb student talk, a blind student see, and a weak student write We did not realise the passing of time in the class which he was engaging us for two to three hours continuously His methodology of teaching was perhaps unique Initiation of a problem should come from the student and not from him The student would not be allowed to rest unless he stated the problem, argued it out, and explained it fully If, however, a student failed to catch the right point in spite of his spending much time on him, then only he would ask another student to get up and help him in answering that point Sometimes a humorous situation would be created in the class when a student would speak out something unrelated to the problem He would love a student who would put the maximum number of questions to him and he would also acknowledge the contribution of the dullest student in the class

32 IN DELHI

In Delhi, Ranganathan would often take the class at his residence A black board was provided at C 6 Maurice Nagar Diploma and the Degree Students would come and squat on the floor like old "gurukul" days and listen, think, speak, argue and write Throughout the period, it was therefore a seminar where each one had to contribute He would sometimes pick out a person who had not understood a problem and make him repeat what had been discussed Thus everybody had to be ever alert on his heels as it were

33 STUDENTS TO SOLVE PROBLEMS

Even though he taught the theory and practice of a subject, his methodology was not to separate the two as is usually done by some teachers He would deduce theory out of practical and practical out of theory Comparative study and linking of ideas with certain human analogies and anecdotes made his teaching a stimulus to intellectual growth. Students learnt every aspect of the universe of knowledge by participating in his class Ranganathan himself would also learn from the students He would say that a certain problem with which he had been struggling for several years has after all been found a solution through a student I remember when one of my colleagues in Delhi, now the Librarian, ECAFE, Bangkok, posed before Ranganathan a new species of phase relation in classification presented by some new books, they both grappled with the problem while travelling in a suburban train of Bombay. It was found to be what is now known as Influencing Relation But Ranganathan immediately called that phase, the Garde Phase, P K Garde being his name

34 SEMINARS ON LIBRARY SCIENCE

Ranganathan's teaching did not end in the class room He would organise seminars and ask the students to participate, making some senior student the leader of the seminar. I remember how he made us participate in seminars in library science at the Delhi University, meeting every week, making several of us leaders in succession, some others of us rapporteurs and still others the chairmen calling them the *Brahma*, chiselling out the issues, circulating the subject and the issues framed beforehand, and making the leader to cite the references as well. Thus in the seminars no body could miss the bus .There could be pin pointed discussion on the issues. Remember, he would not himself be the *Brahma*, but he would be one among us sitting by our side silent all the time, making others speak, inducing everyone to participate He would give his own view only on being requested by the *Brahma*—towards the end of the discussion These seminars have benefitted me most When I was asked, for the first time to be the leader of a particular seminar, I felt like losing the ground under my feet. I pleaded to be excused and would offer myself for the next seminar But even an appeal to the 'Supreme Court' would not yield results I was too nervous to open the discussion when Ranganathan was present. But having been caught, there was no escape from it Several others were caught like me, and now I realise how my participation in the seminars have benefitted me If Kaula is able to speak today, the credit goes to Ranganathan who made me overcome my shyness and nervousness

35 METHODOLOGY FOLLOWED

This experience of having participated in the seminars and its utility, made me organise similar seminars when I was the Reader in Library Science at the University of Delhi and made not only the students but also the teachers to participate and contribute At Banaras, similar seminars were started from the very first year of my going there The same methodology of discussion was applied and the students were brought out of shyness and nervousness as I was brought out of them by Ranganathan

4 Library Profession

41 PRESIDENT OF I L A

As the President of the Indian Library Association from 1944 to 1953, Ranganathan made the Indian Library Association a world-recognised professional organisation, a dynamic force for library movement, and a forum for discussing professional matters He undertook to complete several international projects on behalf of the Association and created a band of young librarians to work with him It may be a union catalogue or a bibliographical survey or even reading the proofs, the students willingly worked and learnt by doing it Those were the *Golden Days* which luckily I did not miss even though I had to come from New Delhi to Maurice Nagar daily, a distance of about 12 miles each way. Ranganathan became the President of the Indian Library

Association in 1944 but the political situation and the after-effects of Partition, paralysed the Association The secretary having left for Pakistan in 1947 without handing over the records etc, made Ranganathan vitalise the organisation by convening the Eighth All India Library Conference at Nagpur in 1948 It was at this conference that he laid down the plan for the library development of the country. I remember how I was asked to contribute and read papers at that conference. It was my maiden appearance at the All-India stage The papers were read by me, I know, without looking at the audience But it created confidence in me and I participated in the later discussions I was not an exception to it Several others before and after me, were forced or coached by him to deliver their maiden speeches just to bring them out of stage-fears

42 Symposia in All India Conferences

Ranganathan would make the students contribute papers to each of the conferences At several conferences he would organise a symposia making others to think write and also participate Lucknow Conference, Patna Conference, Delhi Conference, Bombay Conference, Jaipur Conference and Baroda Conference in 1935, 1937, 1939, 1942, 1944 and 1946 respectively helped the librarians to develop by contributing to and participating in the symposia organised by Ranganathan The Indian Library Association also attained an academic outlook as a result of these symposia

421 Banaras Experience

In 1946, while still students at the Banaras Hindu University, he induced each one of us in the class to contribute a paper to the symposium on Library Catalogue to be discussed at the Baroda Conference I had not till that time written any paper and both my ideas and expression were awful Even now they are, and little could I then imagine that I would one day be able to write papers In fact, I used to wonder how others could write correctly and publish papers When Ranganathan asked me along with the others to contribute a paper, it came as a bolt from the blue I was astonished by his asking me to write when I could not write a single sentence correctly Being afraid of him, I promised to attempt it and the deadline was given The deadline passed, and I had not attempted it. He was furious and asked me to produce the paper the very next day But from where was I to get the paper ? Should I copy out some other's paper and produce it before him to overcome this difficulty? But this was not possible. I could only copy some paragraphs from some books and assemble them together. Perforce I produced a paper made of copied sentences and showed it to him He was not annoyed. He explained the subject to me and told me how to attempt it. I prepared another draft, and showed that to him. He pointed out the repetition of ideas and the superflous matter I prepared another draft This draft had still some contradictory statements and so had to be improved. Another draft was prepared; still Ranganathan would not approve of it It was after six drafts, that he approved my paper But imagine the patience he had to go through each draft and make me improve upon it Other classmates also were made to contribute papers and notes in a similar way.

422 DELHI EXPERIENCE

The symposia at the Indore and Hyderabad Conferences in 1951 and 1953, have been remarkable They cut a new ground. Documentation problems figured in both these conferences, and who were the contributors ? Ranganathan's past and present students He made them all work on them—for several months—before they could be finalised.

The symposia at both the conferences were brought out in a book form by the Association Papers were printed in advance and distributed to the members of the Association The issues of the papers would be framed in the very train in which the delegates would be travelling to the conference Each contributor would be asked to meet him and discuss the issues framed This polished way of organising symposia raised the level of our library conferences Above all, it helped the country by producing able librarians and library-scientists

43 Professional Training

Ranganathan was the first in the country to institute a Diploma Course in Library Science He did it at the Madras University. He was invited to draft the syllabus for the Banaras School, the Delhi School, the Hyderabad School, and the Kerala School Due to his contributions and efforts, India got the distinction of being the first among the Commonwealth countries to institute library education at the Master's Degree and Doctorate Degree levels This he succeeded in doing in 1947 The high level of education and teaching was intended to produce leaders in the profession All thanks to Sir Maurice Gwyer, the then Vice-Chancellor of the Delhi University, who spotted out Ranganathan and invited him to Delhi to organise the Department of Library Science and pursue his research at deeper levels From 1948-55, Ranganathan produced 12 librarians with Master's Degree in Library Science. All of them are now occupying good positions in the profession In fixing the number of students, Ranganathan was always careful to be guided by the anticipated demand in the country. He would never admit a crowd of persons for his personal prestige. His leaving the Delhi University in 1955 created a lacuna and the Degree Course had to be kept in abeyance for five years It was revived only in 1959 when the author of this paper, one of his very first students in the Master's Degree Course had been appointed the Reader in Library

Science This he was able to do because of the grinding he had had while a student under Ranganathan.

44 Library Research Circle

Teaching at the Master's degree level brought forth new ideas and polished some of the old ideas To pursue the subject further a Library Research Circle was created by Ranganathan, attached to the Department of Library Science of the Delhi University as well as to the Indian Library Association He induced about a dozen devoted souls in the profession, to meet at his resident on every Sunday to pursue the subject at a deeper level

After a preliminary exposition of the *Ramayana* from 2 p m, the meeting would start at 3 p m and continue up to 8 p m The members of the Circle would sit on the floor and be absorbed in work without break for five hours Ranganathan's methodology was not to force his ideas on others. He would make a member lead the discussion, himself providing only some guidance This work of the Library Research Circle was responsible for bringing forth new developments in library science The idea of Optional Facets, Rounds, Levels, Zones, Postulates, I am told by him, are the result of the Library Research Circle Ranganathan says that he benefited much by the Research Circle The profession also got enriched by its work If I was able to teach Master's Degree Course at the Delhi University six of the seven prescribed subjects single-handed, it was due to my being a regular member of the Research Circle It kept me in touch with the latest ideas on the subject

5 Library Movement

Ranganathan is the Father of Library Movement in India. He was among the very first librarians who was sent abroad to get himself trained in library techniques. On his return from training in 1925, he had already chalked out his future library plans for India In 1927, he took charge of the All India Public Library Conference at Madras as an adjunct to the Indian National Congress Session In 1928, he founded the Madras Library Association In 1930, he organised the Library Section of the First All Asia Library Conference at Banaras. In 1933, he and Mr Montagu drafted the first constitution of the Indian Library Association In 1945, he inaugurated the Library Association of Central Provinces and Barar In 1946, he opened the first Kerala Library Conference In 1931, he inaugurated the Library Association of Madhya Bharat. In 1953, he helped in the foundation of the Madhya Bharat Library Association In 1957, he founded the Madhya Pradesh Library Association. In short, he has been in the thick of the Library Movement for the last 35 years and has given impetus to library cause by his writings, speeches, resolutions and plans.

51 LIBRARY DEVELOPMENT PLANS

In 1944, Ranganathan wrote the *Post-War reconstruction of libraries in India.* It was then the only document of its kind for the library development of our country. In 1946, he also wrote the *National library system: A plan for India* highlighting the personality of the future National Central Library for India.

In 1948, he drafted a memorandum on the Library Development Plan for India as a member of the National Library Committee The Committee was not serious about its work. And its proceedings were therefore shelved. But Sir Maurice Gwyer made Ranganathan publish this memorandum from the Delhi University. This contained a thirty-year programme It is a monumental plan for developing the library personality of India. Though not implemented by the Government, the students of library science make use of this classical document fully and one day the country may also draw benefit out of it

Ranganathan also prepared development plans for Travancore, Cochin, and Madhya Pradesh in 1946, and for Bombay and Uttar Pradesh in 1947 The last two have been published Bengal and Kerala also got its plan prepared by him in 1958 and 1959 respectively The latest plan is that of the Mysore State. These Library Development plans also contain draft-Library Bills for each of these States

52 LIBRARY SYSTEM

Ranganathan was the first to visualise a Library System for the country. The structure of the library development with Delivery Stations at the bottom and the National Central Library at the apex has been the creation of Ranganathan

53 LIBRARY CESS

Ranganathan was the first to state that a public library is a library supported by public funds For this, a cess should be levied. He worked for it for 14 years in Madras—his home state—and finally achieved this objective in 1948 A network of public libraries could be supported only by a library cess, was his contention This has now been accepted by the Government of India

54 LIBRARY LEGISLATION

Library movement means the establishment and maintenance of libraries There are two patterns for this development One is to create a library system without legislation, another is to have it backed by legislation. Libraries are also established on an *ad hoc* basis This was the proposal in Bombay. Ranganathan did not agree that the libraries could be maintained properly in that case. He brought it home to Mr Kher, the then Chief Minister of Bombay in 1948.

But Mr Kher had to lay down his office before he could act upon this advice The result of the Bombay pattern is now quite evident before us It cannot develop. Ranganathan was convinced of the need for library legislation and he worked hard for it Madras got it in 1948, Andhra is also enjoying it as a result of the bifurcation of the old Madras State in 1955 Hyderabad (of before 1956) also introduced legislation due to the efforts of Ranganathan and K M Ujlambkar, one of his old students

Perhaps it is necessary to write here that Madras did not accept library legislation easily. When introduced in 1934, the Library Bill made no headway Even the Congress Government of 1937 did not help in the matter In 1946, when Congress again came to power, Ranganathan in one of his morning walks saw the name board of Mr Avinashilingam Chettiar who was then the Education Minister. He had been Ranganathan's old client in the library He got in and asked his old client to give him his fees in the form of a Library Act The old client promised to do it He did it He took the bill drafted by Ranganathan It finally emerged as the Madras Public Libraries Act of 1948.

Ranganathan has prepared Library Bills for almost all the States of India In some States, it was moved in their lagislature as well The Union Library Bill was published in 1948 in his *Library development plan · A thirty year programme.* One of his desires is to see this Bill enacted as a Law

541 MODEL LIBRARY ACT

As already stated, Ranganathan was the first to draft a Model Library Act in 1930 The baby was taken to Bengal by Munindra Deb Rai Mahasai after the All Asia Educational Conference at Varanasi in 1930 He sought permission to introduce it in the Bengal Legislature. But it was found to be an unacceptable bill by the then Viceroy of India

6 Library Techniques

Ranganathan is the originator of several techniques in library science His techniques were first introduced in the Madras University Library They were not welcomed by others in the beginning. Even now there are some in the profession who, even though they have not studied them, would oppose them in sheer ignorance We have to pity them. For now his techniques have been universally accepted.

61 TERMINOLOGY

Ranganathan introduced proper terms to denote library ideas precisely and unequivocally. These terms also created some resistance in the library world in the beginning. Some of the librarians even made fun out of them. But undaunted, he went on polishing his ideas and introducing a precise terminology. These terms also have now been accepted all the world over

62 LEADERSHIP IN LIBRARY SCIENCE

Ranganathan has given India a leadership in Library Science. India may be underdeveloped in libraries, but it is certainly a richly developed country in the field of library science I remember what Dr Luther H Evans, formerly Director General of Unesco, stated in Delhi when he visited India in 1954. He said that India was a fully developed country in Library Science as a result of the contributions of Dr Ranganathan India has thus achieved a significant position on the library map of the world.

7 At-One-Ment with Library Science

It is very difficult to sum up all the achievements of Ranganathan in one paper He is a multifaceted genius who has given his all to the library profession

71 BREATHES LIBRARY AT ALL TIMES

Ranganathan breathes library at all times Having moved with him very closely, I observed that he has been charmed by library science From the early hours of his rising till late at night, he talks of nothing but library science Even in ordinary conversation he will connect every topic to library science and once he starts talking or writing about it, he forgets himself

72 FORGETS PHYSICAL CONVENIENCES

Ranganathan forgets even the physical need of eating food But for Mrs Ranganathan who has to remind him, he would perhaps forego the food At times when he would be engrossed deeply in his work, his hands also engaged in writing, the food getting cold, Mrs Ranganathan has to find out a solution to the problem Ranganathan would not move nor place the pen and paper down and Mrs Ranganathan would not also like to get the food cold This has been an oft-recurring phenomenon

73 STRUGGLE IN THE NIGHT

Several persons must be thinking that at least for some hours he would go to sleep during the night. No, not on all days He does not sleep when he is engrossed with a problem. He would be made to go to bed by his son I do not know whether his son is able to do it now. But I have seen Ranganathan continuing working till midnight His son would have finished one round of sleep and suddenly he would come and tell him, "Appa ! you have not allowed Kaula to go Please go to bed immediately." But the father would neither ask me to go nor go to bed himself Yogeshwar would get annoyed and so would give him a mild warning that he was going to switch off the light if he still continued working Father would not like this distrubance and would shout "Poh" ! That means "You go" The struggle between the father and the son would continue, none yielding Finally the son would put off the light and think that he had succeeded The father would immediately call out, "Child ! You cannot realise the struggle of my mind Do not disturb me " But the son would not yield, and so the father would ask me to go and himself go to bed still revolving the problem in his mind Early in the morning when I come, I would find that he had already written down several pages and was still absorbed in his ideas He would be in bed for some time, until a new flash of idea would come to him Then he would get up and start writing again Then his son could not disturb him

74 MORNING WALK

Ranganathan takes morning walks regularly The walks are not meant to distract the mind from his ideas Even in walks, he would go on discussing problems Starting from his place in the early hours in the company of some students with a cane in his hand, he would stop even at the very gate, outside his compound—not to retrace his steps, but to discuss library problems, finding solutions and helping the students Most of the papers would thus be read out and discussed in the morning walks In Banaras, we used to go daily to the Ganges to have a dip Then also we used to discuss several library problems In the beginning, I missed keeping a note book and a pencil with me but later I made amends Several ideas were polished in our morning walks Purification of body with the Ganges-water and the purification of mind with fresh ideas on library science—that was our daily habit On our way back, he would attend to any of the very few social calls as well

In Delhi, the Canons of Terminology were framed thus in the morning walks Several ideas like Apupa pattern, library system, legislation, classification cataloguing and documentation problems were also discussed in morning walks At the time of a conference, the papers to be contributed by students would also be discussed and polished in the morning walks The passers-by on the road would be wondering, sometimes even gazing at what this old man was doing by stopping now and then and talking something unintelligible to them, and sometimes correcting papers etc But people soon discovered that he was Ranganathan talking library science and nothing else

75 UNATTACHED TO FAMILY

Perhaps it is not proper for me to state that Ranganathan has remained unattached to his family life But he has also neglected himself. We can accuse a person for neglecting others only if he is conscious about himself. We have seen that except at the time of food, there was hardly any time when Mrs Ranganathan was able to meet her husband and speak to him. Here too, she has herself to make her presence felt. There were several occasions, when Ranganathan would call her "Adhi !" sometimes for drinking water; sometimes for preparing some tiffin for guests etc. But credit goes to Mrs Ranganathan for having put up with this kind of life during all these years without even a murmur of protest. Remember ! She is not educated in the modern sense of the word But she is a perfect *Devi* She has got the horse sense to judge the persons coming to Ranganathan and to point out to him about their conduct and qualities. She is certainly a most dutiful wife and but for her, Ranganathan's life would have become miserable in his very home She has got enough of fortitude, tolerance, and patience.

751 EDUCATION OF MRS RANGANATHAN

Ranganathan is conscious of her qualities I remember when Ranganathan was invited to deliver a talk in Banaras in 1945, Mrs Ranganathan had accompanied him After his brilliant address on 'Life and Religion', someone among the distinguished guests asked Ranganathan whether Mrs Ranganathan was educated. They asked him because Mrs Ranganathan could neither speak Hindi nor English Ranganathan said", Yes ! She is educated in her own way " "What examination has she passed ?" Was the next question "She has passed the highest examination of her life," replied Ranganathan We were puzzled to hear this answer Ranganathan added, ' The examination of *Pativrata* " It made everyone near him realise about the attachment and the regard that Ranganathan has got towards his life's partner

752 SON'S RESPONSIBILITY

I am reminded of another incident which took place in Delhi about a decade back A Tamil picture was to be screened in the Russian Department of the University All the professors and teachers especially South Indians were invited to it Mrs Ranganathan wanted to go. She asked her husband to accompany her Ranganathan refused and continued working I was also working by his side Mrs Ranganathan again said in Tamil something, perhaps about the same thing. Ranganathan stated that he could not accompany her. Yogeshwar intervened and said, "Father ! You have to accompany your wife." The father refused and said, "You go with her." He said, "If other ladies have gone with their husbands why should she go with her son and not with her husband ?" Ranganathan was adament Yogeshwar took his mother to the picture The picture was to be over at 8 p m. It was 8.15 and yet they did not turn up. Ranganathan got worried, stopped his work, came out of the room and asked me to find out from a neighbour whether they had come I reported that they had come By that time it was 8 30 p m The distance between the residence and the Russian Department was one furlong Ranganathan became very anxious and felt that something wrong might have happened He asked me that we should go to find them out When we reached the crossing outside Maurice Nagar, both Mrs Ranganathan and her son were spotted out coming. We stopped When they reached us, Ranganathan said, "Child ! Why are you so late ? I was anxious about your mother." Up came Yogeshwar's reply, "Why were you anxious about her ? When you did not care for her and neglected your responsibility towards her, why do you bother about her ?" Ranganathan said, "My responsibility was to get you and that is over." Did he actually mean it, I was wondering ? I did observe that Ranganathan had the usual human weakness towards his son and his wife. Perhaps he wanted to convey to his son that it was the son's responsibility to take his mother on social calls

753 LADY WITH A LARGE HEART

Mrs Ranganathan attends personally to all the work of her home There has been no servant in their house At tiffin time she would prepare tiffin for all who were working with Ranganathan She would be pleased to serve coffee and drinking water to each one of us I am grateful to her for feeding me several times with dinner as well Whenever we would be working with Ranganathan and it was late in the night, she would ask us, "*Sapadacha !*" and then change it into Hindi "*Khana khaya*" When we would say, "No", she would exclaim "*Ayayo !*" and ask her husband to allow us to go I also remember how she came to the Ministry of Labour Library in June 1951 to bless me by saying, "I have come because your mother is not here to see you " Her large heartedness was even more visible when she did not object to feeding a Muslim or a Christian in her house, while to all appearance she was a very orthodox lady. But her greatness of heart came to full light when Ranganathan donated his life's earnings amounting to a lakh of rupees for creating a Chair in Library Science in the University of Madras

754 SELF-SACRIFICING LADY

Ranganathan was in Europe for about two years between 1955-57. He had taken his wife with him. They were living with Yogeshwara in Zurich. I was regularly in correspondence with him. In fact, I was the post office to post and deliver the letters from him to various people in India On 15 September 1956, a letter came from Ranganathan which puzzled us He had written, "My wife and myself have recently taken steps to implement a thirty year old wish. Towards the fulfilment of that wish we have been living a frugal life all these years. A month ago, my wife said, 'We are becoming old, our son's education is nearing completion Let us carry out our wish.' We have saved a lakh of rupees and this is being endowed for Professorship in Library Science at an Indian University" What a marvellous letter containing this great news! We did not believe it for some time But the letter was from Ranganathan We admired the sacrifice, the generosity, and the scale of values of Mrs Ranganathan. Perhaps the son was also consulted and he too had agreed. This was confirmed later. In 1957, when Mrs Ranganathan came to Delhi with her husband and attended a reception in their honour at the Wenger's, New Delhi arranged by the Delhi Library Association, I told her, "Ranganathan should have given this money to his son" She replied, "It has been done." I asked, "How has this been done?" Immediately came the reply, "*Rao Sahib* has got two sons and not one The eldest son is Library Science and he has got the money" What a marvellous answer from an "uneducated" Lady! Her son was not present since he was still in Zurich This made us admire her even more. She has dedicated everything to Library Science. We are glad that the Chair which has been finally established at the University of Madras, is named after her It is called the Sarada Ranganathan Chair in Library Science May she live long to help her husband to serve the library cause for many more years to come! I am told that she has also endowed scholarships and prizes at some schools for girls She is really a well-educated lady who is able to recognise the everlasting value of giving away money for a good cause and the value of the work her husband has done during the last 30 years

755 WHOM TO ADMIRE?

Ranganathan has been invited quite often by several national and international organizations from 1948 onwards He was to leave at 2 a m at night We were all sitting in his house He went on writing papers, taking notes and discussing library problems The only person who could not participate in this, was Mrs Ranganathan She was sitting all alone But has she not to say anything? Her husband was flying for the first time and going to be away for about 6 months I am talking about Ranganathan's departure on his tour of Europe and America in 1948 Should not Ranganathan be near his wife at least for some time We were puzzled that they did not spend even five minutes together Had they quarelled?—a cynic might ask No! One was admiring the other who had just shot up into the international plane The other kept himself busy till the car came to take him to the aerodrome We went to the aerodrome. Believe me! Even in the car and till he got into the plane, he was busy talking to us on library matters. Perhaps we were cruel to Mrs Ranganathan in not withdrawing ourselves But she did not mind it. Whom should we admire? Ranganathan who had been absorbed in his work and could not find time to speak to his wife; or his wife who patiently arranged everything for him and was, as it were, drinking him in with her eyes without minding his absorption in his work ! We should admire both, but a greater weightage should be given to Mrs Ranganathan

76 A Hard Task Master

Ranganathan is a hard task master Being endowed with an indefatigable energy, he would like others also to work like him. His great favourite is one who is a hardworking person He prefers him for several reasons He will have perseverence, patience, and the will to undergo any amount of physical strain I am also led to believe that a great asset in a man is his industry He will be able to succeed if he applied his industry to right causes along right lines. Ranganathan's example is before us All great men are industrious people

761 THE MEASURING ROD

Perhaps it will be interesting to analyse the industry of Ranganathan. He has been misunderstood even in his own circle for his terrible industry In the early days when he had been very passionate to get a thing done immediately and that too correctly, he would feel dejected if the results were not achieved Being himself a very hard worker, he has judged others through this measuring rod. But it is not possible to be as hardworking as he has been and so he would feel annoyed with persons who would not be able to do the work Perhaps the reason being that they are not devoted to the work with single-mindedness Ranganathan would not spare the man if he puts forth various reasons But working hard is a habit which can be cultivated like any other habit It is the chief source of success and the surest way to improvement Ranganathan loves hardworking persons and perhaps the reason for his kindness to me was the little work I could do with him, though I do not agree with him in what he wrote to me in 1946 "You are unexampled in industry" What about himself ? There is no comparison to his industry God has endowed him with terrible industry and I should say that he is "undoubtedly unexampled in industry " But let me confess that he has made me physically weep several times for not doing my work properly and on time. Let me quote an instance

762 FOR WHOSE GOOD ?

During the preparation of a symposium for the All India Library Conference at Indore in 1951, a few papers were allotted to me or should I say that I had myself offered to write three papers—two jointly with others and one independently The papers had to be kept ready before 24 December 1950 and a sufficient time had been given to write them. For he was on tour first outside India and later to South India In respect of a joint paper, I requested my other partner to start writing it. He however did not start it and we went on postponing it The other two papers were completed. But the third one could not be done for the well known dictum, "Joint responsibility means no responsibility". On 24 December, when I met Ranganathan, he asked me about the papers. I produced the two papers. "What about the third paper ?" He asked. "It has not been possible, Sir !" I replied. "Why not ?" he asked, and with this he flew into a rage "We could not sit together and write and that is the only reason", I replied. On this frank statement, he expressed so many harsh words and asked me to produce the paper by 27 December, failing which he said, "I shall have nothing to do with you " Even today I shudder to relate this strong attitude of Ranganathan I did produce the paper before 27 December Trembling, I went and showed it to him He became pleased, the anger was gone, and he patted me on my back. There have been several other occasions when he has behaved in that way Little could we realise at that time that it was for our good. We said that he was cruel and unreasonable Some even called him a "tyrant" and dropped out They left his company, but to whose disadvantage ? They lost the opportunity of working with this great master for their own benefit

77 VALUE OF CHARACTER

Ranganathan attaches the highest value to the character of a person He is prepared to ignore his other weaknesses if he is a man of unsullied character He hates those persons who lack character We have got the well known saying that "if character is lost, everything is lost" He likes honest, hard-working, and straight persons But he cannot compromise with evil or with a person without character This principle has cost him to leave out even some of his one-time disciples He has no regrets for this Telling lies he cannot put up with Honest confession of one's guilt or difficulties, he is able to appreciate and then suggest a solution. Having built up a spotless character, he wants those around him to be equally spotless in character If Das Gupta Librarian, University of Delhi, has been his pet number 1, as he himself admits, it is solely for his character If he has condemned others, it is for their lack of character.

771 TENACITY IN ATTACHMENT TO PRINCIPLES

Ranganathan has certain weaknesses too, if these can be called weaknesses He is not a person to sacrifice his principles for petty gains as we generally find in other persons His will is as strong as an iron wall and he is as unmoved as a rock in upholding his principles He gives up the man, the gain, and the result, to stand solely on his principles I am told that he suffered much in the last four years of his stay in the Madras University simply to uphold his principles. Even at the risk of losing his service, he did not come down from his principles of life. That shows the grit of his mind. That is like all great men who have to suffer for their principles in life. Ranganathan was said to have been finally asked to leave the Madras University unceremoniously without a word of kindness because of the strong conviction of his principles. He stepped out without pain or regret On hearing about this, it appears that Sir Maurice Gwyer wrote to him, "I am glad that you have shaken off the dust of your feet against them", and that Ranganathan replied, "Yes I have come out. But no shaking off dust against anybody. They know not what they do. I can only pity them But it is all for my good I know that something valuable is coming round the corner" But only a Ranganathan could do it in that spirit.

772 NO COMPROMISE WITH EVIL

Ranganathan does not care for the middle course He cannot adjust or compromise. Some of his critics call him "an uncompromising person" because they do not attach any value to principles or to character I remember having met one of the top officials in the Union Ministry of Education who expressed his great veneration for him and said that his' book especially the *School and college libraries* was a classic "But why is the Government not making a greater use of his talents ?" I asked He was frank in saying, "Ranganathan cannot fit in the Government machinery. He wants the things to be done immediately and he cannot adjust himself to circumstances " Was this a compliment to the qualities of Ranganathan or the inefficient way in which the machinery of the Government was working ? There is an instance when Ranganathan refused to work with a Committee when they did nothing in three sittings but wasted money and time in inviting some members even from outside Delhi. The Committee used to meet each time without an agenda Serving of tea to the members was the only private event He himself drafted agenda and memorandum for another meeting for the members in connection with Adult Education But the Secretary apologised for having failed to send copies of them to the members Again tea was served at the right time ! And the meeting was adjourned. There is another instance In August 1953, I brought the librarians of Delhi together and founded the Delhi Library Association I wanted Ranganathan to address the inaugural function He was not prepared to come and felt annoyed with me His reason was this He wanted me to utilise my time in research and not "waste" it in other ways Prior to that another incident had taken place I was assisting Ranganathan in the compilation of the *Union catalogue of learned periodicals in South Asia* I had to peddle 14 miles daily on my cycle from my office to C6, Maurice Nagar for this work One evening, due to exhaustion, I scribbled something on the slip—an entry—in my subconscious level. This caused annoyance to Ranganathan since I was told later that I had stated that the work was too much of a task. Without giving me any chance to explain my position, Ranganathan stapped talking to me for more than 2 years. But I was not prepared to leave him and continued my association with him.

In early 1955, perhaps he finally changed his attitude and accepted me again as his own.

78 No Wastage

781 NO WASTAGE OF TIME

Ranganathan does not want wastage of man-power or of material He wants to utilise his time in the best possible way He hates red-tapism and delaying methods He wants quick decisions That way he is very impatient to get results Waiting according to him means wastage, which should be avoided Having stayed in the North for a decade, 1945-55, he has not been able to learn Hindi. But he learnt three words immediately These are *Kal* (tomorrow), *Aj* (today), and *Abhi* (now). Even when he was in Banaras, he started saying "No *Kal* with me" This should be done *aj*, it was *abhi* in certain cases He believes in getting things done then and there

782 NO WASTAGE OF MONEY

He is careful in not wasting money We have observed how he has been trying to save the money of the Indian Library Association With no assets in 1947, he left the I L A in 1953 with an asset of Rs 22,000 in cash Even in sending materials by post, he would try to save the postage by asking people to distribute them by hand As the Managing Editor of the *Abgila*, he would make me take the bundles of the issues of the *Abgila* on my cycle from his house to my Labour Library in New Delhi and distribute them among the members in the Secretariate and other places, thus saving postage At that time, I could not appreciate it But in 1958 and after, when I became the editor of the *Library herald*, I did the same thing without any one asking me to do so and made others also to do it Saving money is a good habit and makes a person careful

783 NO WASTAGE OF MATERIALS

Leave alone the question of money Ranganathan would try even to save the stationery He would not use the blank paper for writing letters or ideas We have seen him using the used covers for writing the reply, by opening out all the flaps He has written articles, papers and notes on these bits of paper which ordinarily one throws into a waste paper basket He has done it to avoid wastage.

784 NO WASTAGE ON TRAVEL

He would not engage a taxi, if he can reach by a bus, and he would not wait for a bus, if he can reach on foot. Saving money and avoiding wastage has been the *dharma* of his life

785 ESSENTIAL REQUIREMENTS

Ranganathan spends only on essential requirements He believes in minimum necessities of life Throughout his life, he had no servant in his house He had no furniture either It is only through the force of his son who was a student in a college and had a different view of the standard of life, that some furniture was bought for his house in Delhi Throughout his life he has lived frugally with minimum comforts to his physical body What about the food Ranganathan eats ? Perhaps many persons may not be knowing that he had been taking only one meal for about 20 years after he reached 40 Why has he done so ? Perhaps to reduce his physical necessities to the minimum He takes in the morning alone his one South Indian meal, which most believe, is not nutritious He does not make much use of fruits either While in service in the Madras University Library, he is said to have seldom taken his food at his home. How could he ? He had to be in the library daily before 7 a m He takes milk in the evening and that too about half a pound During the days of rationing, I had seen people struggling to get extra rations for the requirements of their family since rationed food sustained them only for a fortnight But here was a person who could not only carry on with the rationed food for the month but also save out of it and give it away to servants or others I wish India had persons like him to defeat the theory of over-population

786 NO ADDICTION

Ranganathan has not been addicted to any habits He has never tasted alcohol, or any stimulant or any other drug Being a South Indian, it was surprising to find him without coffee I remember how he used to advice his wife to give up taking coffee since it was not doing any good to her He is not a smoker as well, he hates smoking. Even in his house, he would not like the cigarette ends to remain even if a visitor came to see him Perhaps Das Gupta, a chain smoker, knew how he had to stay and leave when he was with Ranganathan

787 UNASSUMING PERSONALITY

Ranganathan with all the greatness that he has achieved, is a commoner His head is cool and his heart is warm. He is accessible to any one who wants to meet him. There are no formalities and no gatemen to check any one's entry into his house. He is unassuming and you will hardly realise that he is an international figure In spite of having no time for any thought other than on library science, he is always ready to meet and discuss with any one seeking his advice on truly difficult problems of life.

788 VERSATILITY

Ranganathan is a versatile figure. He is at home both in writing and in speaking. He is a prolific writer and a great orator Rarely do we find this combination even in great people. An orator is not generally a prolific writer and *vice versa* Let it be known that Ranganathan was a stammerer till he was 22. But he overcame this handicap when once he was called to speak at the annual function of his college. A full account is given in the *Herald of library science* v1, 1962, p 180 God helped him to get over his shyness and physical disability But once he got over it, he became an orator. He is also a great conversationalist and can speak on any topic for hours together.

8 A Great Benefactor

Ranganathan was misunderstood even in his own circle for living very frugally. Some of them called him a "miser." Some said he was "cruel" to himself. Some said that he never knew how to "live" in this world Still some said that he was not born in this world to "spend" the money but to "hoard" it They felt that his son would be lucky to inherit this money from his father and spend it on his comforts Least could any one think of the purpose of his leading a frugal life We were afraid of asking him anything relating to it. But we found the answer in 1957, when he donated his entire saving to the University of Madras for instituting a professorship in Library Science And what was the amount ? A hundred thousand rupees—collected by a librarian who was not destined to have the benefits of the high scale of salary which he himself brought about in 1959 as Chairman of the Library Committee of the University Grants Commission and even earlier in 1947 by negotiation, with the Chairman of the Pay Commission For though he was the highest paid librarian in his own days of active service, his scale was only one-third of what he secured for us after his own retirement How did he amass that money depending on his honest earnings

The letter that he wrote to the Vice Chancellor of the University of Madras is memorable indeed He wrote

> "Now that I am in the last lap of the journev through life in the present body, my wife and myself have been working out the balance-sheet of the journey On the intellectual plane, there is never a one-way flow and the balance of give and take is automatic But it is not so in the material plane particularly in the monetary plane The small pension allowed for me will pull me through the rest my of life After arranging for an annuity for my wife for the period of her life, we find that there will be a balance of about a lakh of rupees We wish to endow it for the promotion of advanced studies and research in Library Science—a subject that has made life worth living with good cheer in spite of all the vicissitudes incidental to life in society, and a subject with immense potentiality for social good "

81 MADRAS LIBRARY ASSOCIATION

Some persons still believe that he got large sums of money as royalty on his books. Perhaps they are not aware about the actual position in this respect Ranganathan wrote books and gave them over to the professional associations without asking for any royalties. The Madras Library Association published most of his works and except for the author's copy, he took nothing from the Association. The Association on the other hand, not only earned a name but also the full benefit of the sale on his books It has now set apart Rs 20,000 for its own building. Perhaps this money is the balance of the profit it had earned on Ranganathan's books.

82 Indian Library Association

The Indian Library Association also earned a few thousand rupees on the works published by Ranganathan. It was only in 1953, that its Executive Committee decided to hand over the existing stock of books to Ranganathan as a token of its appreciation of his having offered these works to the Association and not having accepted the royalty on them

83 A Carnegie Among Librarians

Thus the lakh of rupees that he saved during his life, was purely out of the salary earned after 1932 Why after 1932 ? In 1925, he used his then savings to establish the Ross Studentship as shown in sec 95 Again in 1932, he gave away most of his then savings to his only surviving brother Mr Natesan as he was thrown out of work prematurely and had a large family to bring up And who has now got the benefit of the third round of his savings Not his only son as one would normally expect. Nor did it go to his wife But on the other hand these too proved to be chips of the same block For, they themselves recommended that the savings should be turned to the development of Library Science. Thus Ranganathan has become the greatest benefactor to Library Science in India and as a Librarian in the whole World. He is not a Carnegie who made a huge fortune as an industrialist, but among the librarians he has provided to be a Carnegie In one of his addresses at the University of Delhi, Sir Maurice Gwyer described him as a "Prince among librarians " He had really meant prince in intellectual achievement But Sir Maurice died before the world found him to be a prince even as a distributor of money. I referred in sec 771 to his tenacity in upholding the principles of his life His endowment to library science is a demonstration of a still another principle of his He often used to quote the words of the great poet Kalidasa, "Amassing wealth to give it away." त्यागास सचृत-श्रयनाम् ।

91 **Among the Immortals**

There is a saying, "They always live who die for a great cause." Ranganathan has lived for a great cause and within his life-time itself, his name has been immortalised Even in 1943, Bernard I Palmer announced his *immortality* from England Some call him the Dewey of the present Age. That great genius did everything to bring library profession into a reality. Ranganathan took the profession to great heights, gave a new stature to it, created Library Science in reality, and above all struck a new ground for research in the subject. Dewey's influence spread only through his classification and that too in slow degrees, Ranganathan's influence has extended in a much shorter time to all the corners of the World through his classical contributions on all aspects of library science That is why the late Berwick Sayers called this age, the "*Age of Ranganathan*" Indeed Ranganathan has shown us a "way forward" as Palmer and Wells put it Single-handed, brushing aside teething opposition both outside and within the profession, Ranganathan has progressed as an astounding star in the international sky of library science

92 India on the Library Map

India is particularly grateful to him for having earned for it a coveted position in the library map of the world. As a great patriot, he has raised the library personality of India to a stature hitherto unknown In his Silver Jubilee address to the Madras Library Association in 1953, former Governor General of India, C Rajagopalachari said that the position that Nehru had secured for India in the international political world, Ranganathan had secured for India in the international library world He has been the first in several respects and he has still remained the only one in those respects India can boast of having produced a classification system, the only classified catalogue code in the world, the Laws of Library Science Chain Indexing and several other techniques in library science—now being studied and adopted by several countries of the world India was also the first country in the East to establish a Model Public Library and the Indian National Scientific Documentation Centre as a result of the persistent endeavours of Ranganathan at the international forum India is still the only country in the Commonwealth imparting instruction leading to a Master's Degree and Doctorate in Library Science. It is also the only country in the World outside the United States, to have instituted an Endowed Professorship in Library Science Not only that, the initiation of library legislation and library system in India and the organisation of university libraries at all levels, have been due to the efforts of one man—Ranganathan.

93 Destiny Again

Providence wanted Ranganathan to create library science with new dimensions I suppose Ranganathan was not then conscious about it For he started his career as a teacher of Mathematics. He also had his training for teaching as well. He found joy in the pursuit of both these subjects. But destiny wanted him to do something else in a subject of which he knew nothing. He strayed into the library profession in 1924 without any willingness for it And when he started working in the University Library at Madras in 1924, and found practically no work in the library to engage his attention, he thought of going back to his first calling—to his place in the Presidency College at Madras Destiny, however, retained him within the library profession

94 Professor Ross

Ranganathan strongly believes in destiny and perhaps he will agree with me when I say that but for Prof Edward B Ross—his great teacher—his life would have been different He would not have even completed his formal university education Destiny had already helped him Being born in not very affluent circumstances, Ranganathan was not able to study further beyond his B A Course He thought of earning his livelihood. But Providence willed it otherwise Edward B Ross, his beloved teacher, to whom he had dedicated his most outstanding work—the Colon Classification—called him and said that he would support him in his post-graduate education I am told Ranganathan did not like to continue on this basis after a few months. Then Ross secured for him a private tuition work to pave his way. From his first savings, Ranganathan established an endowment in 1925 to give a studentship in the name of his beloved Professor—to help a student pursuing mathematical studies in his college—the Madras Christian College Prof Ross encouraged Ranganathan to enter the library profession Till 1932, when he left India, he used to meet Ranganathan in the University Library almost every evening and find genuine joy in the progress his pupil was making in his new field Ranganathan has himself described how his Professor gave the final touch one evening in 1928 to the formulation of his Five Laws of Library Science Thus destiny created for Ranganathan a Ross to make his life different, and destiny created Ranganathan for me to change my entire life

CHAPTER U2

Dr Ranganathan : A Study of a Multifaceted Genius

ABDUL RAHMAN

1 A Dynamic Young Old Man

A PLEASANT evening of February in Bangalore. It is a pleasanter part of Malleswaram. The long tar road from the 18th Cross Road to the 10th runs with a depression like a parabola. From the 18th Cross many happy lads and lasses descend down the trough on their evening walks. A few retired old men are creeping on with their sticks in hand with morose, sordid, grim faces and blank minds; they resemble moving automations. Lo ! Look at the crest before trough ! Another old gentleman descends ! (Is he old ?) He wears a pure white *dhoti*, and a cloak; holds a cane in hand. A *shalya* passess round his neck. Two or three young men come with him. Can he be an old man ? He looks more active than the most active of the young men accompanying him. Now he walks a little, speaks something; makes vigorous movements of his hands; now he stops, turns towards one young man with his penetrating eyes. He elicits an answer from him. Now he is relaxed and walks ahead. Lo ! He stops. Looks at the infinite sky. He is lost in his broodings...He comes back to his friends, with a new gleam on his face, with a new glitter in his eyes. He has found a new thought; he has discovered a new idea. He is in ecstasy. He jolts his young friends with its revelation, he animates them. They are thrilled, overjoyed, and almost overpowered. So descends this strange old man down the trough of the Margose Road unaware of the ground he treads, permeating through the universe he moves. Who is this dynamic, active young old man ? He is the 70 years old Dr Ranganathan on his evening walk with his young disciples.

2 A Ripe Genius

At the age of seventy, Dr Ranganathan is still a volcano of new ideas. His mind simmers with nascent thoughts. His physique wavers under their intense vibrations. Still, it fills him with a new radiance. Now he is a ripe genius. The initial stages of "perspiration" are past. But he himself does not think so ! It is now a fertile period of incessant "inspiration". Any intelligent man just glimpsing at his writings, his works, and his personality shall come to the inevitable conclusion that he is a perfect genius poised by a sterling character

21 INTEGRATED FACULTIES

A genius is a multifaceted personality It is capable of infinite pursuit in any field it chooses. It will have in it the best of human faculties But it becomes a genius when all these faculties get integrated and flow in unidimensional direction. Still, in its works one can glimpse at the various glamorous facets of its personality gleaming here and there adding to the sublimity and grandeur of its chosen path When I say, this, the full personality and work of Dr Ranganathan pass before my inward eyes His case is the best example experienced by me.

3 Nursling of Mathematics and Philosophy

Dr Ranganathan is born of his Father Mathematics and Mother Indian Philosophy into the young world of Library Science With a harmonious blending of the gifts of his parents, he has made Library Science stand out as a strong, sound, and supple youth He has made Library Science as deep as Philosophy and as precise as Mathematics

4 Golden Touch to Library Science

There is no field of Library Science that Dr Ranganathan has not touched But he has been a golden touch Whatever field he touched, he adorned it

41 CATALOGUING

In cataloguing, his Classified Catalogue Code and Chain Procedure have set forth a chain reaction in the world-thought on cataloguing

42 LIBRARY ADMINISTRATION

His book on Library Administration is such a remarkable work that it has been considered as a classic on Management itself In foreign universities, scholars are getting their Doctorate working on it

43 FATHER OF LIBRARY MOVEMENT IN INDIA

His books on Library Organisation and Legislation only reflect the rich and varied experience of a practical and pioneer worker in the field He is a Master Spirit sending the reverberations of library movement in India through its insurmountable inertia and refraction. This he is doing from the very beginning of the second quarter of the century almost single-handed but achieving miraculous results He was the first person to start a Library Science course in an Indian University He did this in 1931 He was the first person to bring about a Library Legislation for the first time in India. He did this in 1948 in the old undivided Madras State. Again he was the moving spirit behind the Hyderabad Library Act of 1954 and the Andhra Pradesh Library Act of 1960 The Kerala Government has just published his draft Bill for Kerala He is trying to move the Mysore State too. His Model Act has become, in essence, a Model Act for all Afro-Asian and other newly reviving countries They are guiding the advanced countries too No wonder he is called the Father of Library Movement in India

44 BIBLIOGRAPHY & REFERENCE SERVICE

His books on Bibliography and Reference Service are unique contributions to the subject His monumental work on Documentation Service—*Documentation and its facets* has been released recently.

Besides, he has written books and articles on Education, Leisure, Philosophy, Mysticism, Management, Scientific Method and on many other topics.

45 LIBRARY CLASSIFICATION

Dr Ranganathan is at his best in every field of library service that he pursued. But he is at his pinnacle and reached ecstatic heights when he enters the field of Library Classification Colon Classification and the methodology behind it, is the biggest ever contribution to the field of Library Classification. *Prolegomena to library classification* is his *magnum opus* and it is one of the unrivalled classics of the world in the development of human thought These two works have revolutionised world thought on classification The greatest tribute was paid to the genius of Dr Ranganathan as a classificationist by the late Berwick Sayers, his teacher and a renowned doyen of profession, when he called our age as the "Age of Dr Ranganathan" in L ssification, in one of the articles written by him towards the end of his

46 FIVE LAWS OF LIBRARY SCIENCE

Permitting all the above works and raising them to greater heights stand unique his *Five laws of library science*, the normative principles which guide every thought, method, and practice in Library Service These normative principles, simple as they may appear, are perhaps as powerful as the Newton's Law in Physics They are capable of library practice and technique derivation *ad infinitum* Dr Ranganathan has indicated their immense potentiality by basing all his works on these five normative principles. Thus Dr Ranganathan has flood-lighted all the sectors of the universe of knowledge that he touched

5 A Catalyst

Our seers said, "*Navanavonmeshashalinee pratibha*" Genius creates something anew every moment Dr Ranganathan's mind is like a combustion chamber. It just required some catalyst to set ablaze a new flame of thought The catalyst may be some young inquisitive student, a fellow traveller in the plane or the train, or a stray piece of reading material. Anything or everything that came across his mind is penetrated with its pure white light and the prism throws a multicoloured strip on the screen of human knowledge. A few days back, he was travelling by plane to Delhi. He found a fellow passanger sitting by his side He had a journal on management in his hand. That was enough. He pulled him into discussion He was the editor of the journal The man sought his help And Dr Ranganathan offered to contribute a few articles. By the time he returned from Delhi, he had gone deep into the subject. He was ready with nine articles on the subject of management. He found that no deep thinking had yet been done on the subject It was a region which required probing. He was telling us that we should be ever eager to find something new and await something that would elevate us. That was his philosophy. Aurobindo's philosophy of *Purusha* and *Prakriti* pointed towards that. *Purusha* (God) was dangling innumerable invisible ropes around us from above It was for the *Prakriti* (Man) to look eagerly for it and to aspire for it, desiring fervently to go higher and higher. Then he might soon go higher and higher

6 Way of Life

61 A Realist

Dr Ranganathan is a perfect realist The patience and the perseverance with which he attends to minute details is really amazing If he finds any fault with the galley-proof he has corrected or the bibliography he has compiled, during second reference, he becomes wild. On such an occasion, he would be muttering within himself "How could it happen ?" Then turned towards me and said, "Sir, but for your presence here, I would have become mad " That shows the determination with which he can master the details. His book on Library Administration is a masterpiece of this type

62 Rhythmic Thought

Dr Ranganathan with all his devotion to details is a poet who can see rhythm in life who can ignore details and listen to music of the whole. He has a fertile imagination. He breaks into poetry while describing the "Garden Library of Lisbon". "On the flank of one of its seven hills, overlooking the blue surface of the Tagus, there is a sunny little public garden with a marble basin in the centre round which flowers riot in rainbow tints, and children shout and run in joyous ecstasy."

"At the far end, there is a giant cedar tree spreading like an umbrella defying sun and rain. Inside its intense shadow deep silence prevails; and you find a line of chairs encircling an enchanting collection of volumes in a lovely book case. Students in their flowing cloaks, workmen white with lime dust, raw rustics with timid and listless eyes, office and shop employees munching their lunch, soldiers, printers, electricians, sailors, and dock hands all share this unique library unhampered by any formality but aided by the nimble, sweet-faced librarian fluttering from end to end with her beaming eyes" If we accept the definition of poetry by Caryle as "rhythmic thought", this is undoubtedly a good piece of poetry Such animated imaginative literary pieces are the springlets of his books which lead you on and on on a delightful journey of thought and poetry In fact, such an approach in his *Preface to library science* made me love the subject the very day I entered as a student of Library Science at the Osmania University His books have been acclaimed as thrillers There are many readers who have rolled in their beds burning "Midnight Current" in a bid to relieve themselves of its enthralling holds, and got asleep His Laws and Canons come personified and play a thrilling drama of profound discussion with sparks of wit and humour His writings are interwoven with interesting stories from his experience, from history, and from old Indian stories. retold in a rejuvenated manner So he is a poet, dramatist, story teller, all those faculties he forges to the end of "selling" his new ideas and thoughts In his case literary art is not an end in itself but only a means to an end

63 INDIAN SPIRITUAL HERITAGE

Dr Ranganathan is a philosopher and mystic Aurobindo has had a good influence on him He can set his mind in resonance with that of his Master when he reads him Shankaracharya is his philosophical leader One who goes through a bundle of his correspondence knows with what a delight he makes friendship with mystics Many a time he has told us how one could achieve that ecstatic state of delight through the pursuit of Library Science too It is a reality in his case His personality is deeply embedded in Indian spiritual heritage It is reflected in his works This is one of the causes why Westerners cannot fully appreciate the profoundity of his thought

64 MYSTICISM IN COLON CLASSIFICATION

The importance which he gives to mysticism is indicated in Colon Classification. Mysticism stands as a new class by itself. His vision, understanding, and his insight on this subject stands out when we read the profound passage by him.

"Its (Mysticism)" province falls within a large debatable territory between

Science and Philosophy which has been very little explored and is still a *terra incognita* to all intents and purposes Its difficulties are immense, from that wide and wild 'No Man's Land' between Sciences and Humanities it rises like some forbidding mountain peak into the heavens and no daring spirit, except the mystics, the seers and the *rishis*, has yet ventured to approach it, let alone to scale its dizzy height But beyond doubt, it is going to occupy a foremost place in the attention of even ordinary enquiries in future, and the time may come when the (MC) may be the very keystone of the arch, and serve to complete the full growing circle of organised human knowledge. It will then systhesise all Sciences and Humanities and become the basis of a truer spiritual outlook than we can possibly have in the ignorance and confusions of our present state of knowledge Undoubtedly this is a daring spirit which has tried to scale those dizzy heights and dive into pure depths of mysticism.

65 Seeking After the Seminal Level

It is perhaps, in such a mystic state that he had the realisation which baffles us. The author of *Colon classification* asks us one day on our way back from the evening walk "Do you know ? For me there is only one subject Seminally, there is one and only one subject which manifests itself in the form of several subjects to the phenomenal world I want to base my classification scheme which shall be perfect one on this seminal rock bed It shall have a schedule of not more than 10 to 12 pages And then, it shall be capable of classifying all the subjects that had been, that are, and that will be in existence in the dynamic continuum of the universe of knowledge My present scheme is not perfect in that because it is not based entirely on seminal isolates It may break down after, say, about 200 years The one I contemplate is a Seminal (Once I called it Primordial !) Classification Scheme I do not know whether I will accomplish it Anyhow, I am able to visualise it It is true for me" Here is the vision of a mystic After all, classification of knowledge is not merely the jugglery of the logicians, it is deeper than all that

66 Scientific Method

Dr Ranganathan is a scientist His Spiral of Scientific Method is one of the best expositions of the scientific method I know how much some scientists and technologists liked it and have kept it for their reference in their day-to-day work and research The credit of raising librarianship from rule-of-the-thumb method to a purely scientific Library Science goes to him He provided it with laws, cannons and postulates He equipped it with a potential, precise and powerful terminology In fact he is endeavouring to make library classification a science as precise as mathematics The facet and the zone analysis, the postulational precedure of classification, the principles for determining the rounds and levels of the facets etc show how precise and scientific library classification is becoming. In short, he is a "Master Mechanic" who has provided Library Science with its "Tools and Techniques".

67 Separation of Idea Plane and Verbal Plane

The biggest breakthrough in the very *modus operandi* of human thinking was brought about by Dr Ranganathan Thinking is the most difficult, yet most powerful process of the mind The verbal plane which is only a vehicle for the flow of thought has been affecting and straining our thinking. Many a good thinker has floundered because of the snares of the "Verbal Plane" Perhaps for the first time in the history of human thinking, Dr Ranganathan liberated thinking from the clutches of the Verbal Plane and set it free in the more spacious heaven of the absolute "Idea Plane" He separated these two planes and defined clearly their functions He found that the verbal plane is often corrupt with human interpolation It could not fully obey the commands of the idea plane Hence the refuge in the "Notational Plane" which is an artificial language created by the scientists to obey the commands of its Master This analysis of human thinking has once for all simplified the process of thinking itself Every branch of knowledge should explore its pontentialities Undoubtedly, they are immense This is really a coveted gift to the world of thinking from a Genius in Thinking All these things have made Library Science essentially a discipline in scientific thinking In fact, a Senior Engineer of a big industrial concern who has had some discipline of library science, was telling me, "I wish I had undergone some discipline of library science It clears up my thinking process It teaches me to think logically " This is, of course, a tribute to Library Science of which any professional should be proud

7 Personality

71 Full Personality While Speaking

Another facet of Dr Ranganathan's genius is his oratorial ability He is very able and powerful speaker Speaking for him is a process of loud thinking As a speaker he has held in his grip many an audience both in East and West His full personality is put into his talk Many gaze at him in wonder and delight when he is on the platform He has developed scientific methods even in Seminar Techniques and has used it as a powerful method for research and dissemination of knowledge

72 Confluence of Paradoxical Faculties

The study of Dr Ranganathan as a multifaceted genius is extremely interesting For, it is a rare confluence of highly paradoxical faculties. He possessed with perfect facility and felicity the faculties which people think are usually on opposite poles. He is pragamatist who is a philosopher, a mathematician who is a poet, a realist who is a mystic, a writer who is also an orator, a conservative who is a revolutionary, an Eastern who is a Western. (Once he told my friend, "I am out and out a Western in my outlook.) He is a profound scholar who is not a pedagogue He is an intellectual who very often rises into the regions of intuition He has written much, spoken more, but thought much more.

8 Contribution to the Library Profession

Dr Ranganathan is a genius who has given a purpose, direction and vision to the profession of Library Science When it is fully developed, it may become the Pilot of the Dynamics of the Universe of Knowledge, controlling, steering, and propelling it in the right direction to result in a greater efflorescence of human happiness.

This is the Master's dream, his vision, may it come true ! Let us put our shoulders to the wheel to arrive at the fortunate day That will be our fitting tribute to the Multifaceted Genius who has endeavoured to raise our profession so high, who has dissolved his whole personality for its cause

CHAPTER U3

Dr Ranganathan as I See him

G M PATIL

0 First Meeting

I MET Dr Ranganathan first in March 1936. I then went to Madras to receive training in Librarianship in the Madras University. That day it was slightly drizzling and the weather was cool and fine. After a formal greeting and exchange of words I asked Dr Ranganathan whether the weather was like that in Madras during summer, because I had read in geography that Madras would have unbearable heat in summer. He said, "No, you have brought the Western climate with you."

1 Teaching in Madras School

We used to meet our professor—Librarian—every day for discussion on practical classification and during lecture hours. The discussions were usually during lunch interval. His questions, hints, elucidations and thought-provoking remarks were very refreshing, stimulating and enlightening. Every one of us would be sorry to miss that opportunity if any one had to do so for reasons beyond one's control. The course then at the Madras University was stiff, rigorous and exacting. Every student had to be busy right from 11 a m to 5-30 p m—quite unlike our experience in our college days. We were always engaged in practical work, observation work, doing routine, general browsing, acquainting ourselves with reference work, taking part in discussions, and listening to lectures. Although Librarianship was not then accepted as a science, I felt it to be a science even then, because only science students in colleges had so much of practical observation, and field work in addition to lectures.

Madras was the first University to start a course in Librarianship. The content of the course was something quite new. For a long time, it was the only library school in the country. Moreover, it had many unique features. It attracted students from outside Madras state. I myself went to Madras at the suggestion of Mr K Ramaswamy Ayyangar of my college who had taken the course in Madras during the preceding year. In fact, the impact of the personality of Dr Ranganathan produced a kind of chain action from each set of students to the possible students of the next set. The reputation of the school soon spread throughout India by this chain action, without any formal advertisements. Verily, it could be called the "Nalanda" of modern times, for this specialised field

2 Glory of Indian Library Association

As President, Dr Ranganathan was the first professional librarian to occupy the presidentship of Indian library Association. He became President in 1944. Before that time the Commissioner for Education with the Government of India continued to be the president He could come only for the biennial ritual of a conference Naturally, he could not make any contribution to the profession. Fortunately, Dr Ranganathan continued as a President for nine years. During this period, he infused dynamism and vitality into the association and the profession. The work turned out during that period of ten years was more than that of an Association of long standing in an advanced country He raised the Association from its infancy to its adulthood It gained world wide recognition. It became a peer with the Associations of other nations He saved the conferences from being dry, monotonous and ceremonial and made them the forums for discussions of a high academic order The developments and the results of research in library science made under his guidance came up for active discussion in the conferences The periodical started by him on library science under the title *Abgila* reached a very high standard even in the first year It was recognised and accepted as a top ranking research organ in the world

3 Classificationist

Dr Ranganathan is a Classificationist (वर्ग चार्य) par excellence. He is the well known author of the Colon Classification He is the "arch ruler". Rulers are known for ruling over their subjects But Dr Ranganathan rules not only over subjects, but also over micro thoughts with his masterly art and technique of "divide and rule". Where classification is concerned, he holds leadership. When international conferences or conventions on classification are held Dr Ranganathan's presence or his papers are felt absolutely indispensable.

31 COLON CLASSIFICATION

The Colon Classification emerged out of the practical necessity to organise the holdings of the Madras University Library. It was evolved and improved by experimentation It soon attained considerable value and worth. It was also taught in the library school. After its conception in 1924, it passed through the embryonic stage in 1933, and crossed the infant period in 1939, when it attained maturity, it was then able to face boldly the world as a whole.

As is natural and normal with ideas and organisms, it had to stand the test and trial of survival, and face and withstand the onslaughts of opponents

By 1942, the scheme had made itself manifest as an efficient and acceptable one in the place of the older and generally accepted Decimal Classification It had won recognition and won also a good number of devout followers. This drove the handful of the protagonists of Decimal Classification in India to criticise the Colon Classification in a dogmatic and irrational manner very much as in motivated political propaganda The challenge was accepted by the followers of the Colon Classification They proved beyond doubt the superiority of the Colon over the Decimal in a symposium in the All India Library Conference held in 1944 at Jaipur

4 **Library Prophet**

I have yet to speak of my deeper and lasting impression of Dr Ranganathan I regard him as a prophet I am not saying this just out of my highest regard for him I say so with firm conviction and factual reasons The great Western critic and philosopher Emerson said that all great thinkers are prophets Dr Ranganathan is a great thinker His vast literary output of micro-thought and macro-thought bear testimony to it He is thus a prophet in the Emersonian sense

Another testimony about the genius of a prophet is his intuition His utterances whether casual or deliberate come out to be true I have had experience of this on two occasions

41 KARNATAK UNIVERSITY FUNCTION

Some years ago Dr Ranganathan had been invited to a tea party by the Vice Chancellor of Karnatak University But the Vice Chancellor himself failed to turn up at the appointed time A message was received saying that the Vice Chancellor was sick The situation led to some speculation among the other guests It was guessed that Dr Ranganathan would raise some inconvenient points which the Vice Chancellor was reluctant to discuss However, hearing of the news of the Vice Chanceller's sickness, Dr Ranganathan uttered spontaneously "He will be alright when I leave this place" And it happened exactly so The Vice Chancellor (Mr. C C Hukkoti) was at the time of the tea passing through a critical state due to a sudden virulent attack of paralysis. No one knew about it at the tea time except the domestic servants and the doctor attending on him. The doctor stayed with him throughout the night The next morning, he showed clear signs of recovery from the fatal attack when the doctor came out with a sigh of relief. This I heard from the doctor himself

42 D C Predictions

Here is the second occasion. A symposium had been organised on the occasion of the All India Library Conference at Jaipur in 1944 The subject was. "Decimal and Colon Classifications viewed in perspective". Dr Ranganathan wrote an introductory paper for the symposium Dr Ranganathan had remarked in that article that the Decimal Classification was suffering from a pathological obesity and it could no longer continue in that state These remarks had not come to the notice of many, not had it been seriously accepted by the few that had read it The edition of Decimal Classification, then current was the 14th edition But surprisingly enough and as if to make the utterance of Dr Ranganathan true, the succeeding 15th edition was very much reduced in volume almost to less than half of the 14th edition The editors themselves doubted whether it could be truly and legitimately called an edition or whether the world of librarians would accept it as such. The probability was that it would be regarded as an abridged edition. In order to prevent this mistake, it was given the title "Standard 15th edition"

43 Selection of Disciples

The genius of a prophet lies in his insight and in the selection of disciples. Here is an experience In 1944 I was annoyed by an ignorant attack on Colon Classification by one who apparently knew little about it It came as an article in the *Library bulletin* of the Indian Library Association This made me write to Ranganathan what could be done in the matter As the 14th edition of the Decimal Classification had just then come out, he suggested a comparative study of it and the Colon Classification I took the responsibility to promote a symposium on this subject for the All India Library Conference of 1944 to be held at Jaipur. In connection with the organisation of this symposium, I had to consult with Dr Ranganathan regarding the contributors He suggested the name of a British librarian who had then come to Madras on war service He was Bernard I Palmer He had very little previous contact with Dr Ranganathan Even then, Dr Ranganathan visualised in him a good disciple and had accepted him to work with him while in Madras. And Palmer has proved to be a good and devout disciple and an ardent exponent of Colon Classification and its new techniques such as Facet analysis and Chain procedure

5 'Guru' in the Profession

I am a bad correspondent in the sense of writing very rarely My exchange of letters with Dr Ranganathan was on an average one or two in a year, except in connection with the organisation of the above-mentioned symposium I have formerly addressed him as Rao Sahib, Professor, and Doctor. Since a few years I am addressing him as "Guru". The word has a classical and symbolic sense conveying deep regard and reverence. I have observed many colleagues in the profession having similar regard and reverence towards him.

6 Sage in Private Life

Every one that visits Dr Ranganathan at his residence in Bangalore would feel Dr Ranganathan to be a sage. His house, its atmosphere, his pure and simple way of life, his devotion to duty in rendering service to humanity, cannot but help create that feeling He is really having the "Vanaprasthashrama" of the Vedic times *Adhyayana* and *Adhayapana* are his whole and soul This I have been observing since the beginning of 1961, after my transfer to Bangalore as the Assistant Curator of Libraries

7 Dedicated to Work

I had inadvertantly fixed an appointment for Dr Ranganathan with a Minister of State on a day of religious observance When I realised the mistake, I consulted Dr Ranganathan whether he could accept it He said that there was no religious observance for him nor any performance of rituals It is only work that he minds Like Carlyle, Dr Ranganathan seems to hold that "work is worship" and there seems to be no religion for him other than that As I have seen it, to Dr Ranganathan life is work, work is joy, it is joy and life in one

PART V

EVALUATION (LIFE)

likewise seems to me unnecessary, it is either the thing to be classified, that is the sum of the other facets, or it is nothing. The whole idea arises from thinking in terms of main classes or historical disciplines, and, to my mind, a more useful employment could be found for the letter [P] by using it for a 'purpose-facet' to be used when discussing the works of man, and occasionally of animals. Take now some of Dr Ranganathan's Personality facets and see what follows if they are abolished or changed.

4 Categories Illustrated

1 In Library Science the 'Library' is the Personality facet If these schedules were headed "the science or study of the activities and techniques used on recorded thought for the dissemination of ideas" 'Library' would be unnecessary as a facet Either it would be part of the space facet indicating "building in which" the activities takes place, or it would be the sum of the other facets, that is the whole nexus of activities and material organised towards the 'purpose' of dissemination of ideas

2 The 'body' in Astronomy would be the matter facet—astronomy being the field in which the position in time and space [T] [S] of heavenly bodies [M] and their behaviour [E] are studied.

3 'Work' in Engineering is redundant If we classify a book on bridges we are classifying the structure and manufacture [E] of iron and steel [M] organised for the 'purpose' of traversing obstacles

4 'Substance' in Chemistry would be a 'matter facet', likewise 'Organ' in Biology, and so forth

5 Further Elucidation of [P]

To return to my opening paragraphs, if the concept 'personality' does add something to the list of physical characteristics, activities, make-up, age and provenance of Dr Ranganathan, just what does it add that is not a label synonymous with 'Dr Ranganathan'? Those who believe in the soul would say "that part which survives on the extinction of the visible, tangible presence of Dr Ranganathan", and with this view there could be no argument, only a statement of disbelief and non-recognition, though the idea or mental image which we hold of, say, 'Shakespeare', is perhaps fairly near to it The same is true in other spheres. It is possible to hold in the mind the general idea of a bridge, but I doubt whether this adds anything for the purpose of classifying writings about bridges. These are either about organisations [E] of matter [M] for the purpose [P] of traversing [E] obstacles [M], or are about man's ability to think abstractly [E] about purposes [P] such as traversing [E] obstacles [M].

6 Creation of a New [P]

There is to me one other possibly useful way of thinking about Dr

Ranganathan's [P] facet and that is to say that in certain fields of knowledge there is a useful shorthand which enables a classificationist to use at one level a Personality facet which is equal to the sum of the other facets at a lower level, and this personality gives the main class or labels the field of study. Thus, if 'man' is the subject of study to the biologist the facets will be (in addition, where necessary, to Space and Time) cells [M] of different sorts and their behaviour [E] and man [P] will be the field of study To the cytologist cells (Personality) will be the main class and nucleus etc [M] and their behaviour [E] the facets Where 'man' is given as 'Matter facet' the [P] facet or main class is 'Society'. To the timber merchant a tree is Matter, to the forester a Personality; to the poet a poem is a Personality, to the social anthropologist, Matter Thus each 'Personality' is at one level the whole field of study, and, at the higher level, is the Matter which, when other facets are added, will produce a new Personality or field of study.

CHAPTER V2

The Ranganathan I have Experienced

T RANGANATHAN

1 Introduction

INDIA has produced many great people—saints like Aurobindo, poets like Tagore, and statesmen like Nehru. In the field of Library Science we have—Shiyali Ramamrita Ranganathan.

2 The Physical Plane

Dr Ranganathan is tall and slim, with shining eyes and long fingers—the fingers which hold a facile pen and have written more than fifty books. He is simple in dress—though he has travelled all over the world, the externals of Western culture such as mode of dress have not influenced him. He wears a simple *dhoti* and an ordinary *banian* with a rosary of beads around his neck and with a crescent shaped mark on his forehead. He looks divine. He is not only simple in dress but in life too. His house is filled up not with furniture, dressing tables, and wardrobes but with shelves full of books and letters. He sits in a cane chair and with a small plank as a support for writing, he goes on working till he is pulled out from his intellectual world by the gentle voice of the partner of his life Srimati Sarada, who reminds him of the existence of others in the house and the daily duties he had to perform.

3 Physical and Intellectual Wealth

One may wonder why he is so simple, why he should not lead an extravagant life ? Unlike others, instead of amassing physical wealth, he is amassing intellectual wealth but he gives both to the cause of the profession. He donated a lakh of rupees to the University of Madras to establish the Sarada Ranganathan Chair in Library Science. Though having reached the threshold of the biblical three score and ten, he is till devoting all his time to the cause of the profession. Librarians and documentalists from far and near come and live with him for days and weeks to collect the flow of his thought.

4 Enemy to Notes Dictation

One habituated to orally dictated or lithographically supplied notes in his under-graduates days experiences something new in his teaching Ranganathan condemns this method as inhibiting and dehumanising His way of teaching trains the mind in the right way of thinking. His way of teaching does not pack the memory but trains the intellect This I have experienced while learning from him the postulational approach to classification. Being new and unaccustomed I began to take down the notes under the force of my college habits But he asked me to stop it and to listen, think and understand He worked out an example and explained the seven successive steps in practical classification When we worked the order examples, Oh ! what a joy we felt when we arrived at the class numbers smoothly, unerringly and inevitably

5 The Way a Day Goes

51 The Forenoon

His day begins with dawn He gets up when it is still dark, and sitting in his chair and with his plank as a support, he goes on working—it may be a book to be published or an article to a periodical or correcting the article of some body Then he goes out for a walk with visiting librarians by his side Even during walking, he discusses with them the nascent thought sprouting from his fertile brain After finishing his morning routine, he again sits for work not alone but with librarians He works and becomes one with the subject, till he is reminded about his lunch

52 The Post Arrives

Now the Postman brings him additional work He delivers a bundle of letters bearing the stamps of different countries. One contains an article for correction, another asks for contribution, and a still another is a request for a lecture Some struggling librarians ask for a note of recommendation, another sends a budget of problem for solution, an old student wants an urgent testimonial and there are others asking for improving the scale of salary of the profession The class of letters inducing depression in him describes the woes of a librarian whose ignorant but power-mad authority asks him to pay the cost to some books taken away by some of the officers of the institution He responds to them all Invariably his reply goes by the next mail He will be immersed in this work till the evening.

53 The Day's End

Then another group comes to him. He spends his time with them discussing and teaching. Oh ! he is physically tired but not mentally It is better he goes to bed With this feeling the group retires But even in his sleep perhaps his mind will be thinking about the problem. Oh ! at last he got it He wakes up and immediately notes it down That is the report of his family Next day it takes shape as an article.

6 Global Mode of Work

Perhaps it concerns some new problem in classification He tries out by application to a number of cases He discusses it with friends He makes a preliminary announcement in the form of a note in the *Library herald* and in the *Annals of library science* When fully proven, it appears in the appropriate schedule of the *Colon classification* His way is not to take up unconnected, discreet problems. For several weeks he will pursue a single problem in all its facets. Perhaps by the end of the year, a major result is obtained Then he expounds it in a major paper His twelve Annual Reports as Rapporteur General of the F I D/C A (The Committee of the General Theory of Classification of the International Federation for Documentation) had their origin in this way His mode of work is described as global

7 Lasting Locus of Personality

Dr Ranganathan has reduced all the ideas and practices in the library field to five simple laws 1 Books are for use, 2 Every book, its reader, 3 Every reader, its book; 4 Save the time of the reader, and 5 Library is a growing organism Thanks to Dr Ranganathan, even a layman can realise the significance of library and a student can do research A perusal of his books and of his articles clearly show that all his new thoughts have stemmed from these Five Laws. Perhaps these Five Laws form his far reaching most potent and distinctive contribution His personality will live longest in these Five Laws These will form the lasting locus of his personality

8 Working Without Resting

He has his weakness too as a thorn to a rose. But his weakness is of a special kind—the weakness born out of the strength of his conviction to work even in hours of physical weakness When once he returned from Delhi, he had an attack of fever The doctor advised him to take rest. But he would not listen He worked preparing notes for the forthcoming Standards Convention and correcting the proof of the book When he is prevented from doing all these, he just lay on his bed and went on thinking and at times in the ecstasy of his joy at finding a new solution for a problem, he scribbled it down on a slip of paper. All his articles were only written on bits of paper as and when the ideas came People usually find pleasure in resting without working, but he finds pleasure in working without resting.

9 Beacon Light

He laid the foundation for the subject, built the road alone, made it easier for us to travel It is now left to us to work, he acting as a guide His thoughts and works are sure to serve as beacon light for others who follow the track May God give us the opportunity to work under his able guidance for many more years to come

CHAPTER V3

Ranganathan as known to me

G A SRINIVASAN

0 First Meeting

IT was on 7 July 1921—the day of reopening of the Presidency College (Madras), after the summer vacation—that I first met Shiyali Ramamrita Ranganathan, who joined me and my colleagues as Co-Assistant Professor of Mathematics in that College. Mr Ranganathan who has a better memory than mine claims that he and I met each other outside the room of Professor R Littlehailes to whom we had gone for an interview sometime early in April 1917, for the vacant post of Assistant Professor of Mathematics. I vividly remember the smiling well-shaven face with the 'Gobi' crescent on the forehead, the white muslin turban, the dark woollen suit and necktie on his medium built body, and socks and shoes. These would alternate with china silk turban, tussore coat and white dhoti.

1 Early Morning Walks

From that memorable date, 7 July 1921, I have been an intimate friend and admirer of Ranganathan. Between that date and the beginning of 1923, in addition to spending about five or six hours together in the College on working days, we used to meet every morning. Ranganathan was a regular walker on the Triplicane beach road—the world famous Marina of Madras—and would kindly call at my house early every morning. His voice ringing out 'Srinivasa Ayyar' would pull me out of my bed—if I was not up already. I would often make him wait on the pial of my house till I had my cheering cup of coffee—what a pity it is that Ranganathan has not had the taste of coffee (or tea) all these seventy years of his life ! We would trot down Pycroft's road and the South Beach road between Napier Bridge and the Office of the Inspector General of Police, and back home. His dragging me out for his morning walk—it was new to me—very soon began to do considerable good to my health—both of body and mind. Ranganathan used to pull out similarly a few other friends for these morning walks—Mr M S Sabhesa Ayyar, Professor of Botany in Madras Christian College, and Mr G V Narayanaswami Ayyar, Mathematics Teacher (and later Headmaster) in the Hindu High School, Triplicane—that venerable institution of which the Right Honourable V S Srinivasa Sastri was head for several years before he joined the Servants of India Society We would be joined by a few other friends, the most prominent of whom was Mr I K Lakshmana Ayyar of the Indian Industrials, Madras The walk would be combined with considerable talking—on all topics under the sun—shared between Ranganathan, Sabhesa Ayyar and Narayanaswami Ayyar I was not—and I am not—a good talker, and was a silent listener I am proud to acknowledge that these talking walks widened my mental horizon considerably

2 Move into a New House

In February 1923, Ranganathan and I moved into 11 (later numbered as 15) Sami Pillai Street, Triplicane. The house had just then been built in the backyard of the house in Bandi Venkatesanaicken Street just opposite Kellett High School My father-in-law, Jambunatha Sastriar, performed Vasthu Santhi and Navagraha Homam in the Koodam (hall) on the north half of the house It is my belief and that of Ranganathan too that this house-warming propitiatory rite enhanced the fortunes of the occupant of this wing of the house We shared the house as cotenants for 18 months, till Ranganathan left for U K to have his training as Librarian It was during this period that I had the opportunity of knowing him at very close quarters, knowing him in almost every "facet" of his life

3 Closer Association with Ranganathan

It was then that I gathered the details about the first three decades of his life which I have now set forth in the following paragraphs In respect of his activities after January 1924 when he left the Presidency College to take up the appointment as the first Librarian of the Madras University—he wonderfully equipping himself for all aspects of the profession of Librarian by working in various important libraries in the United Kingdom to which country he was deputed for training by the authorities of the Madras University—his pioneering and bold venture in organizing the University Library by introducing the now world-famous Colon Classification, by inaugurating the Open Access System, by effectively organizing a reference section in the Library and the home delivery system, by keeping the library open from 7.00 AM to 8.00 PM everyday of the year without closing it on even a single day, by thus changing the library from a safe preserve of books and periodicals into an effective instrument—a veritable temple—of study and research—his ceaseless labours in planning and erecting the present building of the University Library which was formerly situated in the Museum buildings as part of the Connemara Public Library, under the supervision of the Curator of the Madras Museum—his starting the Madras Library Association in 1928 and developing it into a first rate body of persons interested in library idea, by his work as the Secretary and later as its President—his work in popularising the Library Movement by introducing the Diploma Course in Library Science in the University of Madras, his framing the Model Library Act and helping its being placed in the Statute Book of some of the States of the country, his work in bringing into existence, District, Village, Rural, and Mobile Libraries—his switch over from the Madras University Library to the Banaras Hindu University Library and then to the Delhi University—his association with the United Nations Organisation, the Unesco, the several international library organisations and the Library Associations of many a country, thereby widening the range of his activities beyond geographical limitations necessitating his travel abroad and round the world several times during the last ten or fifteen years, his being recognised as one of the few top grade Library Experts of the world, and lastly, his prolific production of a whole library of books on almost every aspect of library science—these are outside the scope of my article I am utterly incompetent to deal with any one of these topics They will be found in the writings of the other contributors to this Commemoration Volume

I limit myself to a few biographical details and give the readers of this publication my humble estimate of his life and work during the first thirty years of his life, before he blazed forth as a Nova in the library firmament

4 Birth and Parentage

Ranganathan was born in Shiyali in the Tanjavoor District of Madras State, in his maternal grandfather's house in the North Rampart Street (Vadakku Modavilaga Theru) at about 9 30 A M—Gayathri Japan day in the month of 'Adi' of the year Nandana, (9 August 1892)—the time and the date when Brahmins in most households would be reciting the sacred Gayathri Manthram, the objective being Samvatsara Prayascvittam and Mithyateta Prayascittam—atonement for commissions and omissions in the previous year

His Janmanakshtra is 'Danista' and Janmalagna 'Kanya' (Unlike the Prime Minister of India, Ranganathan and I are believers in Astrology) Our friend Mr P Vishnumurthy Rao predicted sometime in 1920 that Ranganathan would have a considerable foreign travel He was the first child of his parents and the first grandchild of his grandparents both paternal and maternal. His father, Ramamritha Ayyar, belonged to the village of Ubhayavedanthapuram in the Nannilam Taluk of Tanjavoor District. He was a landlord holding a medium-sized landed property of wet-land growing paddy, the principal food-crop of the fertile Cauvery delta—the granery of South India He was a learned and cultured man used to giving Ramayana Pravachanam—the exposition of *Ramayana*—to small audiences (Ranganathan has inherited this trait of his father), influential, and was held in high regard by the people of the neighbourhood and by visiting officials. Seethalakshmi, the mother of Ranga—that was how he was known to his relatives—was a simple and very pious lady The parents had three sons and a daughter—one of the sons died early and the daughter was a posthumous child.

5 Education

Ranga's education was inaugurated on Vijayadasami day in October 1897 with "Aksharabyasam". The ritual consists of the invoking of the grace of Saraswathi—the Goddess of Learning and the words, "Om Namo Narayanaya Sidaham Namaha" being spelt out by the child imitating the priest, and the same being written into a cup of milk which the child is made to drink Two days later, Ranga was taken by his father to his maternal grand-father's house in Shiyali and was put to school. Ramamritha Ayyar went to Shiyali again in December that year and took Ranga back to the village for his annual vacation He felt proud of the achievement of Ranga and his becoming the top child in the Infant Class Examination with barely two months of schooling Ramamritha Ayyar again took Ranga back to Shiyali on the reopening of the school early in January 1898 and left him in charge of Subba Ayyar—brother of Ranga's maternal grandfather and a primary school teacher, with the following parting words "I leave Ranga in your charge, please educate him well and bring him to the forefront " Ramamritha Ayyar fell ill on returning to his village and died a few days later, on the day of the Makarasankranthi—'Pongal'—on 13 January 1898 He was then only 30 Ranga's mother survived the father for more than sixty years and died in her eightyfourth year in the Delhi University Campus—Maurice Nagar—after a couple of days of suffering due to the shock consequent on her clothes and shawl catching fire accidentally while she was in the act of removing a charcoal oven from one room to another in the early hours of a cold winter day in January 1953

51 TEACHERS' INFLUENCE

During his school days, Ranga came under the influence of two of his teachers who had a great part in shaping his mind—R Anantharama Ayyar, infant-class teacher, and Thiruvenkatachariar, Sanskrit teacher The former used to tell Ranga about Saivite shrines and the life and teachings of Tamil Nayanmars (God-mad persons) chief among whom were Sambandar, Appar, Sundarar, and Manickavachakar The latter supplemented this lore with his knowledge of Vaishanavite shrines and the compositions of Alwars (God-mad persons). I found Ranga well-informed about the history and traditions—"Sthalamahathmyam"—local history—of almost every one of the temple-towns which are one of the main attractions of Tanjavoor District It has long been my desire—perhaps never to be fulfilled—to go round all such temples of Tanjavoore District, with Ranga as my tourist guide and to learn at first hand about the various "padal petra sthalangal"—the places whose glory have been sung by the Saivite and Vaishanavite saints and seers

52 CHANGE OF ACADEMIC YEAR

Upto the end of Ranga's school course, the academic year was from January to December with about six to eight weeks' break during May-June and a month's vacation in December-January. The academic year was changed to June-April from the year 1909—the changeover necessitating a long working year lasting from January 1909 to April 1911—the annual vacation becoming a three-month period for colleges from early April to end of June It used to be said that this change was made to enable the British Professors who were very numerous in those days to spend the summer in their colder home country It made possible the spreading out of the university examinations and the leisurely valuation of the scripts and the more lesiurely publication of the results. The change was definitely for the worse from the point of view of South Indian students and teachers the examinations having to be taken in the hot days of April, the hotter days of May to mid-June having to be somehow spent in the villages and towns with nothing to protect them from the humid heat, the water sources (wells, tanks, and rivers) getting mostly dried up, making it difficult to get enough water to bathe or even to drink and lastly the students and their parents, having to roam about the cities and towns in the hottest period of June-July, in search of seats in colleges and schools which were too few to meet the ever-increasing demand I have definitely felt bored by the very long recess from mid-March to early July and I am sure that other teachers and students too would have had similar experiences

53 TOPS HIS CLASS

Ranga was the top boy in his class throughout school course in the S M Hindu High School (Shiyali) and passed the Matriculation Examination in First Class There was the usual examination in December 1908 and those declared to have passed in it had to take a re-examination in January 1909 owing to a leakage of some of the question papers of the December Examination. Ranga's achievement was all the more creditable because he was sick with bleeding piles and anaemia from 1907 to 1909, he could not even sit up and read; he would be lying on bed and listening to the lessons being read out loudly in his own room by his classmate M N Venkataraman whose family was in the same house as cotenant This, fortified by Ranga's attentively following the class teaching enabled him to master every subject of his study His power of understanding and retention was remarkable—he was an *Ekasanthagrahi*. Ranga's Headmaster Mr P A Subramanya Ayyar, who later succeeded Mr V S Srinivasa Sastri, to the Headmastership of the Hindu High School (Triplicane), chided him for his rashness in rejoining the school in 1908 in spite of his not having been cured of his illness, warning him that he was risking his life thereby.

54 Goes to College

Ranga was admitted in the Junior Intermediate class in the Madras Christian College in March 1909. Being not of sound health, he somehow managed to travel from his village to Madras in the crowded train and joined the crowd of boys and their parents waiting to meet the Principal to obtain admission Shy and diffident due to his being new to the metropolis, Ranga was standing in some corner hoping for good luck. Good luck did turn up. The Principal, Dr Skinner, surveyed the crowd, tore through it, caught Ranga by his coat sleeves, took him into his room, and gave him the admission card after verifying from the marks-list circulated by the University for confidential use by Principals—that Ranga had scored high marks in almost all subjects.

55 Brilliant Academic Career

Ranga passed the Intermediate Examination held in March 1911, with a high First Class, he passed the B A Degree Examination of March-April 1913 also with a First Class In June of the same year, he joined the Post-graduate (M A) class in Mathematics, as the only student of Prof E B Ross in the first set after affiliation by the University Being a "unique" student, Ranga did not have to take any regular hours of lectures but was moving about with Prof Ross and getting the lessons in the corridors, staircases, and in the Professor's room It was a queer example of *Guru-Sishya* (Teacher-Student) relation Ranga obtained the M A Degree in Mathematics in 1916 His College had intended to absorb him in its staff, in the vacancy expected to be caused by Prof Ross going out on furlough for one year from April 1916 But the war-duties of the Professor in Madras prevented him from going out on furlough Therefore, the College authorities asked Ranga to join the Teachers' College, Saidapet, in July and study for the L T Degree

56 Close Association with Professors

During his college days, Ranga stayed mostly in Saidapet and managed to travel to and from the college—then situated in its old building opposite to the Madras High Court and overlooked by the fine statue of the Reverend Doctor Miller to whom was due the high popularity and the rich tradition of the college—popularly called "Miller School"—by the then neither very frequent nor punctual sub-urban (steam) trains of the South Indian Railway He cultivated intimacy with a few of the Professors Professor Moffat and J P Manickam of Physics, Prof Sabhesan of Botany, not to mention Prof Ross, Chinnathambi Pillai, and L N Subramanyan of Mathematics.

6 Teaching Career

It was in the end of March or early April 1917 after finishing his training in the Teachers' College, Saidapet, that Ranganathan and I were interviewed by Prof R Littlehailes for the post of an Assistant Professor in Mathematics in the Presidency College, Madras, in the vacancy caused by the resignation of Sonti Purushotham who chose to go back to Vizianagaram Maharaja's College Littlehailes selected me in preference to Ranga to whom he said, "Look here, I have my own boy with a First Class First. Should I not take him ? Will the Christian College take an outsider in preference to an old student of theirs ?" Ranganathan gave a clever rejoinder, "My College is a private one But yours is a public institution. It must, therefore, be thrown open to all" This impressed Littlehailes who, I have reasons to suspect, later regretted his decision though I must confess that I tried to do my very best to justify the choice by my devotion to work—but I am sorry to confess that I had no research work to boast of Rañganathan was appointed to the Subordinate Educational Service, and worked in the Government Colleges in Mangalore and Coimbatore before he joined me in the Presidency College on 7 July 1924 In the two former institutions, he taught Physics to School Final students, in addition to the bare 8 hours of Mathematics for the junior and senior Intermediate classes

61 An Impressive Teacher

Ranganathan and I were co-workers in the Presidency College for two and a half years from 7 July 1921 to 4 January 1924 when he was appointed to the newly created post of the Librarian of the Madras University Library He taught Algebra and Trigonometry to the Intermediate and in addition, Analysis to the B A (Pass) and (Honours) classes, while I did Geometry (Pure and Analytical) I found that Ranganathan's Algebra classes were not of the dull and boring type as most Algebra classes are—all mathematics classes are generally of this category—but were very interesting and lively Ranganathan was a follower of the individual method of teaching, putting questions and eliciting answers and encouraging the putting of questions by the students themselves and discussing them, he was against the mass-lecturing type He was not of the variety of teachers who talk at the students, without caring to see whether his audience follows or understands the topic of his lecture or not He was a believer in the pedagogical principle that students must be made to think for themselves instead of being spoon-fed He would also interpose his teaching with many anecdotes and examples from life which would keep his audience in good humour Each hour of his class would be punctuated by at least half a dozen applauses—a phenomenon rare in mathematics classes Ranganathan's flair for teaching has never flagged—even now he has a bunch of interested young men studying under him the technique of Documentation He organizes seminars and study-groups in Library Science

7 Family Life

Ranganathan was married early in 1907—before completing his fourteenth year. His father-in-law must have been a very bold man indeed in deciding to give his daughter in marriage to young Ranga who was weak and sickly and who had a large family consisting of his mother, his grand-mother, his brothers and sister to be taken care of with the very limited resources of his patrimony. Perhaps the gentleman was impressed by the uniformly bright school career of Ranga, he must also have been a believer like Ranganathan and myself in astrology and must have satisfied himself about the longevity and the bright future of the boy of his choice. Ranganathan's first wife was very devoted to him She never talked aloud, she would do the cooking, would feed him well, would gather his articles of dress and make him ready to go to his work, she would also attend to the wants and whimsical moods of her mother-in-law and then only take her own food. She died on 13 November 1928 a couple of days after the Deepavali as a result of accidental drowning in the Parthasarathy Koil Tank, Triplicane, where she had gone for a bath Ranganathan married his present wife, Shrimathi Sarada in December 1929, a year after he lost his first wife I can claim to have had a small part played in the bringing about of this happy marriage—one of the dozen alliances—most of them happy—which have been brought about with some little intervention of mine during the last forty years!

Ranganathan had been fortunate in his two successive life-partners Both have been typical *sahadarminees*, helping him in every way and making him comfortable so that he could carry on his work without distraction Both the wives steered safely and successfully their married life through the ebbs and flows of Samsara Sagaram caused by the proverbial stormy moods of mothers-in-law who are hard to please

Ranganathan has only one son, T R Yogeswar, born in 1932 He is also highly talented and is an able Designs and Planning Engineer in the Hindustan Machine Tools Factory at Bangalore, which he joined a few years back after several years of training in Zurich

8 Personal Life

81 HARD WORK

His devotion to work is almost unexampled Perhaps it is sometimes overdone He would go to the library after his morning walk and would go on assisting his staff in the various sections of the Library—Counter section, Reference section, Periodicals room, Classification section, Accession section etc. He would have his food brought to the library and would stay there till the closing hour—which used to be eight in the night If it is a question of writing a book, he would sit up far into the night and dictate the matter to a stenographer. He has not been seen to have taken part in any games or have any recreation except his morning (and sometimes also evening) walks. All work and no play may make Jack a dull boy. But in the case of Ranganathan, the effect was just the opposite—it made his mind clearer and sharper.

82 Expects Hard Work of Others

But there was just one snag—he would expect his staff also to follow his example of working very hard and in a few cases they would protest and however only one rebelled twitting him that being not bothered with a big family and being paid fairly well, he could afford to work all day without any thought of his family, but that he himself could not have the same amount of detachment; but others, like Mr Sivaraman of the Classification and Cataloguing section loyally followed in his footsteps

83 Good Nature and Affability

Ranganathan is very sociable and is a good mixer, quite amiable and likeable He wins friends and admirers by virtue of his attachment to work, sheer good nature, and affability. He does not go about "catching" friends. But he has a large circle of friends, to whom he is sincerely attached But for his innate qualities of affection and charm, he could not have won the regard and affection of Presidents Rajendra Prasad and Radakrishnan, of Chief Justice Sir Maurice Gwyer, and of such distinguished persons as Sir P S Sivaswami Ayyar—not to mention of many of the librarians and others in several foreign countries He never used his intimacy with the V I P's to further his own prospects or to get his kith and kin benefitted

84 Simplicity and Generosity

Ranganathan was absolutely simple in his habits and still continues to be so—his dress was and is simple, not gaudy, his food was and is simple not luxurious, and yet he relishes good food He used to take a variety of vegetable dishes; his other wants were and are still very few indeed It is a wonderful fact that he has not known how coffee or tea would taste any time these seventy years of his life during which he has travelled many times all over the world Any human with less self-control would have easily succumbed to temptations such as drinking, smoking, and other evils

85 Non-Attachment to Property

Ranganathan has been careful in spending money, almost bordering on miserliness, but he never stinted when occasions of family life demanded decent levels of expenditure He is not of the grabbing type in respect of wealth. Otherwise he would not have given away all his family property to his brother Again when he changed over from the teaching profession to be library profession in 1924, he utilised his savings to endow a studentship in his College to be named after his Professor Edward B Ross. He has not much attachment to money and property. He is indeed generous. All these qualities are still found in his life. Otherwise, he would not have handed on a plate the large sum of one hundred thousand rupees to the Madras University for enabling it to found a Chair of Library Science, in spite of the fact that during the last few years of his twenty years of service in that University, he had not been well treated, and I make bold to assert that he was literally hounded out of his office on account of his being a Brahmin and a good Brahmin for that matter. The ruse played by the authorities was despicable—an assistant in the library belonging to the favoured community and longing to take his place—was asked to do the stock-taking for more than one year at a stretch utilising more than half the staff for this purpose all through more than one year. He gave a report that a few books were not traceable in an institution with an immense collection of books and periodicals, with open access to the shelves provided for thousands of readers every year, and with a circulation exceeding 200,000 a year Well, that is an episode of which our University must feel ashamed quite as much as for their not being able to have Dr C V Raman or Dr S Chandrasekharan to adorn the chairs of its respective departments. The episode happened in 1945 on the eve of retirement of Ranganathan However, twelve years later, in accepting the gift of Ranganathan in 1957, the University was willing to name the Chair after his wife—as the Sarada Ranganathan Professorship in Library Science

86 KARMA YOGI

Ranganathan carries out thoroughly everything he takes up From 1921 to 1923, he was Secretary of the Mathematics and Science Section of the Madras Teachers' Guild By the splashy public lectures he arranged and by his making his section the watch dog over the question papers set for the various examinations, he not only made his section well-known but also achieved some valuable results in the conduct of the examination Though he was in pensionable Government Service, he took up the cause of teachers in private schools By two timely papers based on Interest and Annuities and published in the *Educational review*, he saved the Scheme of Provident Fund to teachers in private service from becoming a mockery. This was in 1922 Again, he took over the Treasurership of the Indian Mathematical Society with a balance exceeding just two thousand rupees and handed the office over to his successor a few years later with a balance exceeding ten thousand rupees He is a true Karma Yogi according to the yard stick set by the Lord in the *Bhagavadgita*

> "Your right is only to do the work falling to your share never to the fruit of your work. Flirt not with fruits"
>
> (Chap 2, verse 47)

His work is of the *Satvik* variety laid down in the *Bhagavadgita*

> That work is *Satvik,* which is done by one without wishing the benefits of the work to oneself, ever free from attachment, and drawn into action neither by desire nor by hatred
>
> (Chap 18, verse 23)
>
> "That worker is a *Satvika,* who has given up attachment, who is free from ego, who is endowed with will and cheerfulness, and who is equally unaffected whether the work becomes a success or a failure "
>
> (Chap 18, verse 26)

87 INFLUENCE

The personality and example of Ranganathan have had a beneficial influence on several of his friends and students Many of them value this influence I take this opportunity for putting on record how greatly he has influenced my own life and character. I began to be affected by his love of work for its own sake even when he was a teacher along with me—even before he became a librarian and his love of work blossomed to levels of higher potency I must not conclude this account of Ranganathan's life and work without expressing my indebtedness to him—not only for his help in enabling me to complete building my house, 'Ranganivas'—but also for giving me a new and wider outlook of life

May he live long and continue his invaluable work for the benefit of the world

CHAPTER V4

Ranganathan as I know him

K CHANDRASEKHARAN

0 Birth of Two Associations

IT was the year 1928. After the important sessions of the Indian National Congress at Madras when the Independence resolution was moved by Pandit Jawaharlal Nehru in December, 1927, many side-activities of those important sessions resulted in the founding of bodies like the Madras Music Academy, the Madras Samskrita Academy, and the Madras Library Association. There must have been something auspicious of the times; otherwise the institutions that came into life then, could not have shown signs to prosper and pave the way for a lot of original and lasting work to be done.

01 MADRAS LIBRARY ASSOCIATION

The Madras Library Association had its first informal meeting at the residence of the late V V Sriniwasa Ayengar who then lived at Luz, in Mylapore. The idea of a movement for the propagation of libraries began to take root in the the hearts of persons like Sri K V Krishnaswami Aiyar, T R Venkatarama Sastri, V V Sriniwasa Ayengar, and Dr S R Ranganathan, who was then the Librarian of the Madras University Library.

The meeting took place in January 1928, and no sooner did the idea take root than the matter was beaten into shape through a number of similar gatherings at which important decisions were taken. The Library Association was formed; its constitution framed, its rules carefully drawn. With another year a sumptuous volume containing articles from diverse hands, emphasising reading habit and the use of libraries was published. The stimulus for rearing up of libraries was exactly what the Library Association aimed at.

1 Librarian of the Madras University

But however much one can expatiate on reading habit and the necessity for the library atmosphere, unless a librarian at a public library happens to be quite upto the expectation of help from him sought by the reading public, surely any movement to propagate the idea cannot succeed. Looking back at the years when Dr Ranganathan was the Librarian of the University Library at Madras, one feels how much imperceptibly was his influence felt on those who went to the library for reading or for reference His industry and equipment provided him with such knowledge that the persons resorting to the library for even a stray reference on any subject will never go unrewarded He was there to show you both by precept and example how to avail one self of the Card-index system introduced by himself Further, even otherwise his general knowledge was of the level that either he tried to aid everyone in need of help for any reference or himself pursued the very processes through which one could alight on a book on the open access-shelves of a library

2 Five Laws of Library Science

It all now reads like a romance how by one devise after another that he experimented with, the whole library science became a subject of absorbing interest not only to him but to the rest who worked with him When the "Five Laws of Library Science" appeared on the horizon, many were besides themselves in wonder how he could manage to reduce it all to the exactitude of scientific terms and analysis Even the no-changers (for anywhere there are likely to be persons who cannot adjust themselves to newer ways of thinking and acting) slowly began to feel that there was a lot of sense in what Ranganathan did and said

3 Outside Library Science

Leave alone his particular services in the field of library science his mind was never found wanting in alertness for any other thing going about whether it was mathematics or book-printing, none-the-less it attracted his attention But strangely enough, Ranganathan has left out the habit of reading newspapers as a vice. The reason for such a determined outlook may not be far to seek, may be the feeling that often the news aspect of a daily can be of help only to persons who have a tendency to gossip and idle away time in sheer purposeless talk.

4 Fruit Achieved

Soon his *tapasya* (it was regular concentration upon a single aim in life) began to bear fruit and his austerities got only interrupted in the shape of travels of necessity to all parts of Europe and America, demanding his presence and personal guidance and study of problems facing countries in their beginnings of building up a library system. Wherever he went, he retained his principles and his kind outlook His intense love of the *Ramayana* has imbued him with an optimism and sureness of objectives in life that easily evoke all round appreciation to-day. His inner rhythm knows exactly where to seek its fulfilment for the development of mankind in the thick folds of knowledge. There is here and there a gentle stir in his nature to clothe his favourite thoughts and ideas in a language that is nearest his own heart and expression. Sometimes his books like *Social education literature* may not immediately draw the ordinary reader by the peculiar numbering of sections and paragraphs and his own system evolved for imparting quicker methods of references to researcher.

5 Personal Qualities

All the same Ranganathan is a man with many likeable personal traits He is ever punctilious about the work he performs. He never tarries at any place beyond necessity He does everything without fuss—a quality rare in those who have come into the glare of public life His activities in connection with the advance of library science has now got extended to ever so many allied spheres like library construction, library buildings, library furniture and Indian standards of measurement and materials for use in libraries Yet he has allotted to every one of the claims on his time and attention enough of his own hours of work The time taken for flying from place to place apart, there is very little breathing space misused by him knowingly or unwittingly.

6 Donation of Life's Earnings

To all those, in his way of pursuit of a particular subject of knowledge, respect and appreciation can be directed as but due To him something more than homage has to be paid His frugal life has enabled him to garner up all his earnings, only to finally part with them for founding a Chair in the Madras University for Library Science It is something surpassingly rare that he, a man of very limited means, should have had the hearty cooperation of his devoted wife and his only son, in this great act of philanthropy Normally one should have expected the sum he endowed, for a man of limited resources, to be a big slice of his hard earnings Not only did he mark his own gratitude to his *Alma Mater* on the occasion of its centenary celebrations with a handsome donation of a lakh of rupees, but talked of it to none, either before or after He protested against a very just gesture from the Madras Library Association of which he has been and is the very life, to honour him with an evening entertainment, as a waste of public money, and only accepted a formal meeting whereat he was garlanded with roses

61 STORY OF A MONGOOSE

Vidyadana is a great human act that purifies the giver and the receiver There is a story of a mongoose told in the *Mahabharata* It seems it came to the *Yajna* performed by Yudhistira and complained of the meagreness of the sacrifice. When questioned why such a strange complaint, especially when the sacrifice performed was at a great cost, it narrated its tale which put to shame the entire court of Yudhistira A Brahmin, his wife, his son and daughter-in-law were living on the collection of rice from door to door every morning, in the village One day there was only a little rice in the house and so they could only prepare rice-kanji for the entire family Just at the moment of their partaking of the stuff, there appeared a guest, himself in the throes of hunger and thirst The householder gave his share to the guest after much competition among the rest of the family for the honour of giving away their all One by one everyone of them had to part with her or his share as the guest's appetite did not abate at all till all of them had to fast. A little particle of food on the ground got stuck to the body of the mongoose which happens to contact the ground on which the particle was left The mongoose's body was half transformed into gold. The other half of it remained its old self The mongoose tried to roll on the spot of Yudhistira's great sacrifice. But it was of no avail in the matter of turning the mongoose's body into gold.

62 LAMP IN DARKNESS

The fable is only an indication of how much intrinsically greater can be an act of sacrifice when done with nothing left for one's own upkeep Even so, Ranganathan's deed shines like a lamp lit in the dark, throwing far its beams in this naughty world

7 A Genius

A genius is described as one who can advance real knowledge a bit more in the proper direction only because he has thoroughly imbided all that has gone before him Ranganathan has indeed added to the sum total of knowledge by his singleness of pursuit of library science, which but for him, might have never become so exact and practical an instrument of acquisition for the entire literate world.

CHAPTER V5

My Master

T GOPALAKRISHNA RAO

0 Qualities of Dr Ranganathan

IT is indeed a matter of great pride, honour and rejoicing to me that the great services of my beloved master in raising the standard, status and dignity of the library profession in India, have borne fruit. To offer him my sincerest felicitations through this *Festschrift*, is just to show how he has laid the students of library science in a deep debt of gratitude. His versatile knowledge, profound scholarship, ever-kind smiling countenance, genial temperament and helpful attitude form the great source of his personality.

01 FATHER OF LIBRARY SCIENCE

Dr Ranganathan is the Father of Library Science in India and is greatly responsible for making the people 'library conscious'. He is the founder of the Madras Library Association, promoter of the growth of other library associations in the country, and an active President of the Indian Library Association for many years. The first Public Libraries Bill was introduced in India in the Madras State under his inspiration and able guidance. He is the first luminary to receive the Doctorate Degree *Honoris Causa* in Library Science in India.

02 FOREMOST SCHOLAR

He is the foremost scholar in Library Science and his works cover every aspect of Library Science and his original and masterly work *Colon classification* has already secured for him a permanent place in the history of Library Science. He even excels Dr Melvil Dewey of U S A and James Duff Brown of U K in that he is not only the originator of a hospitable scheme of classification but also a theorist in classification and the builder of a School of Thought in Library Science of the highest order. His prolific pen produced several books in the library field laying standards in classification, cataloguing, organization, administration, documentation, reference service, bibliography and on every other aspect of Library Science.

1 Master Educator

Dr Ranganathan has the accuracy of an intuitive mind and the conscious hand and discerning eye of the perfect worker He will be long remembered not only for his scholarly contribution but also for his efforts towards creating a band of ardent workers burning with great zeal and enthusiasm for the cause so dear to him, working ceaselessly but silently in spite of inadequate recognition and remuneration, carrying his message to millions of people living even in the remotest corners As a teacher he is kind to his pupils, treats them with a fatherly affection, draws them close to him with cheer and inspiration No one who approaches him is turned away or discouraged, for his radiant smile chases away the clouds of gloom and fruitlessness I have had the good fortune and great privilege of studying under him and at close quarters My first interview with him at the University of Madras was quite interesting In July 1944, I entered the Madras University Library and saw a gentleman at the counter, dressed in a dhoti and a shirt and an angavastram with spectacles and a smile on his face I enquired whether I could see the much-reputed Librarian He inquired what for I told him that I would like to consult him on some important matter in the library field He said he would try to help me if I wanted, but I politely refused to waste any further time in discussing with him and requested him to show me the Librarian I was directed by him to go to the Librarian's room which was just opposite the entrance gate When I went there, to my great surprise, I found the same gentleman in the same simple dress but with a more radiant and inviting smile sitting on the chair and kindly informing me that I could speak to the "Librarian" then Greatly admiring within myself, the unostentatious and simple nature of the great man, I asked him about the library profession and its benefit He told me in his own inimitable precise, lucid way the existing state of affairs and the future possibilities necessary for its development and that though materially the benefit was very little, spiritually it had everything Further he encouraged me to a good extent saying that he desired to take me as his pupil as he could see great potentialities in me for carrying out the mission of library science Such is the message of this master to his pupil While teaching, he used to create great interest even in the dry subject by his masterly way through a psychological approach To bring to light the vast scope in the service of the library field, he used to ask for a correct definition of the term "Library" To impress the need for classification, he used to put questions on interrelated topics and on how to give a correct place to them in the great universe of knowledge To stress the need for a systematic and conventional method of arrangement among the subjects, he used to ask whether the child or man was the first, whether seed or tree was the first ?

2 Fountain of Knowledge

Dr Ranganathan is a versatile scholar in various subjects and fields of knowledge Outside the class, I used to spend long hours with him in our evening and morning walks and used to quench my thirst from the great fountain of his knowledge. Whether it be Engineering or Architecture, Religion or Science, Music or Medicine, Chemistry or Electricity, Mathematics or Literature, Philology or Philosophy, he is perfectly at home and speaks with an appropriateness and appositeness that are remarkable

3 Hard Task Master

He takes keen interest in the progress of his pupils and whenever they seek his advice they are flooded with letters Though he is thus kind to his students, at the same time he is a hard task-master in expecting the best performance possible from them Carelessness or negligence or indolence or scrappy and hasty and slovenly work are frowned upon Nothing to be misplaced nor omitted nor left in a faulty condition Everything should be critical and accurate He heads as the poet would put it, the

लोके पुरुषसारज्ञ साधुरेको विनिर्मित
"Gift to be critical without bitterness,
to measure up men and yet be good "

4 Indefatigable Worker

What he teaches he practises He is ready to face an eternity of toil if that is needed for the fullness of his creation, the Colon Classification From edition to edition he shows remarkable development in the hospitality of the schedule of Colon Classification for new isolates and subjects, noting every minute detail, finding out every minute defect, gap, twist, or incompleteness He carefully considers and weighs accurately all that has been done and all that remains still to be done For, nothing is too small or apparently trival for his attention, nothing however impalpable or disguised or latent, can escape him He is scrupulous and indefatigable in moulding and remoulding each facet in the Colon Classification till it attains its true form and fulfils its precise purpose 'Nothing short of a perfect perfection' satisfies him

5 International Figure

I have also had the unique honour of enjoying the hospitality of the Toronto Public Library Board, Canada, to work with them for one year for the first time as Librarian from India and in attending the Library Conferences in London, Ontario, and A L A and C L A Conferences at Montreal where I could come in contact with outstanding Librarians in the world and later under the auspices of the British Council, meet famous librarians like Mr McColvin and Mr Wells and the others at B N B, British Museum, Oxford and Cambridge Universities in U K Wherever I went, I found his reputation extending far and wide and that his opinion and advice are valued most. And I had the great opportunity of discussing with the Librarians abroad up-to-date problems facing the library profession and how Dr Ranganathan's contributions were helpful in solving their problems, how in Colon Classification the original universe of knowledge is divided and sub-divided into various categories, how the facets in it encountered in the field of knowledge are all manifestations of the Five Fundamental Categories—Personality, Matter, Energy, Space and Time, and how the notational provision for linking facets together is able to bring together all the facets in a coordinate relationship to designate a complex idea Such an analytico-synthetic classification is greatly helpful at the documentation level where a subject is in reality a complex aggregate of specific isolates, each of which is a theme by itself discussed from one particular angle Its scheme for book numbers is also more informative, less complex in most cases, and greatly useful in all cases

People used to wonder whether he had the benefit of any nectar, otherwise, how could he be so agile, active, and indefatigable, flying from East to West and back participating in International Conferences so often It seems he said to one foreign librarian, who desired to know his age as he was still strong and energetic, that he retired from the Madras University fifteen years earlier

So strong, tireless, careful, and efficient a builder, organizer, administrator, technician, architect and classifier and a great teacher, is my Master His life looked like a demonstrat of the saying of the great Telugu poet Vemana

> "The teacher is the root of all, the disciples of a teacher are the branches men can seldom find the *really excellent* teacher in the world "

6 Application of Techniques

I am very happy after my return from abroad that I am in a position to implement the latest principles of Dr Ranganathan at this place, namely, Annamalai University, where the appellation "Library Science" was first born in the course of his lectures in 1928 on the basic Five Laws of Library Science

7 A Pledge

Once again in offering him my sincerest felicitations, I pledge myself to follow his load and work to the best of my abilities, to improve the standards of library service to still greater heights, deriving more and more inspiration from him.

May the Giver of all gifts spare this most energetic and intellectual giant for us for many more years so that his selfless services may strengthen the Indian library profession and attain the utmost perfection possible.

8 A Philanthropist

I also feel proud to claim myself as a disciple of the doyen of Library Science whose energies are devoted to dissemination of knowledge. He earned only to give. I cannot do better than quote the great Indian Poet Kalidasa

प्रजानामेवभूत्यर्थं स ताभ्यो बलिमग्रहीत् ।
सहस्रगुणभुत्स्रष्टुमादत्ते हि रसं रविः ॥

"Solely for the welfare of his subjects did he take taxes from them, it is well-known that the sun sucks up water to give it back a thousand-fold "

The fact that he graciously contributed his life's earnings for the establishment of a Chair in Library Science in the Madras University speaks for the lines quoted above

CHAPTER V6

What Matters with Dr Ranganathan

ANAND PRAKASH SRIVASTAVA

0 Analysis of Ranganathan

SCHOPENHAUER has divided the world of thinkers into two categories. Firstly those who think themselves, and secondly, those who think through others. The latter are the rule and the former an exception. Ranganathan belongs neither to the first category exclusively nor only to the second. He is a synthesis of both. In Ranganathan we find the reflections of great predecessors, and at the same time nobody can challenge the originality in his works. The versatile genius that he is, he has given plenty to the world of librarians. If we analyse his work patiently, they will make his giant predecessors look like pigmies. It is without doubt, that Ranganathan stands head and shoulders above, not only to his contemporaries but also the long line of his able predecessors. Purpose here is not to establish the above statement. This was just to introduce him academically.

01 CLOSE CONTACT

I have endeavoured to analyse the things which matter with Ranganathan in his public relationship. This I have selected to attempt because like a few others in India, I also had an opportunity to come closer to him during my stay in Vikram University, Ujjain. To reveal a secret, it is during this period that I inculcated a desire to play Boswell on him. This article is the first attempt.

2 Saintly Looks

Starting on the task, let me first of all find out as what Ranganathan looks like. Dr Ranganathan and myself were travelling from Ujjain to Bhopal, by train. In the compartment there were three Americans: two women and one man. They had seen some of India and of course must have read about it. One of the elderly ladies, could not resist commenting, "Excuse me, you look like a Saint". Before Dr Ranganathan could reply, I had intervened to enquire, "What makes you to say that ?" She was able to understand my question as is apparent from her reply, "Less by the dress and more by the appearance and brightness on the forehead."

3 Set of Values

Coming to the set of values which Ranganathan has, I can safely mention that, to him the first place goes to character, honesty, respect for truth in thought as well as deed, industry, and sincerity. To have a faith in the above set of virtues is one thing and to practise them in life is another. What I know of Ranganathan, I am convinced, that he has actually lived over these principles. It is difficult to establish the stage (or age), where from he had been following these principles in a perfect manner. This could be guessed on the basis of the present strength of these qualities in him My valuation is that they are at least a generation old They might have emerged long before that, but they could have got cemented in him only after his transmission from emotional plane to intellectual plane It is generally expected that a man crosses the emotional plane in his thirties

4 Work-chastity

The second set of his values is work-chastity, with a total resistance to fall a prey to the temptation to play with fruits, and single-minded devotion The fact that Ranganathan has written more than fifty books explains his work-chastity For his entire service-period he stayed in Madras University and not attempted to capture the positions outside explains his resistance to fall a prey to the temptation of higher salary or bigger position

5 Free from Vices

The third thing about him, I would ask, "Is he unaware of dishonesty's triumph in the world of affairs ?" Ranganathan won't be an exception to mankind We all know that dishonesty would flourish for some time but not eventually The answer Ranganathan would give is that such situaions should neither corrupt a man nor even depress one

51 GOD FEARING

With the type of man, I have painted Ranganathan, I have the responsibility to answer one more question. Is Ranganathan unaware of people ridiculing him for his peculiarities ? I think, not. I would further say that he is not afraid of being ridiculed particularly by those whose principles of conduct may be totally different from the above

6 Poor Eater

Ranganathan, has more than often mentioned himself 'a poor-eater'. Poor eater, according to him, is one who believes in 'simple food'. I have not seen him eating non-dinner-dish-items. It would look to him a typical thing if one smokes or chews a betel No tea and no coffee; only cow's milk is both his nourishment as well as stimulant. What to say of meat and eggs, the onion, he thinks, should not be taken

7 Child-like Nature

There are different aspects of his child-like nature. He would not even speak to a person, with whom he is angry. One of his very favourite students, I am told, lived for about three years without a word from him, and that Ranganathan would turn his face when he would happen to come before him Today that student is his godson One moment he would be angry and at another, soft and polite. I had to accompany him in a car to a place about forty miles away. The car was very late Its arrangement was my responsibility. But the car was not mine. The car came about 50 minutes late. The driver explained that there was some minor defect and he had to get it repaired It was so difficult for me to stand his sight until the car had come Once we had occupied our seats and the car had moved, he lost no time in remarking that it was none of my fault if some trouble had started with the car Because, I had already taken his anger in a grandson's spirit, there was no question of my feeling uncomfortable till the remarks came from him This would be revealing of another secret to mention here that Dr Ranganathan would never harm anybody A reference was made to him about a middle aged librarian, who was not efficient. Instead of writing anything against him he preferred to abstain from replying

8 Value of Minor Incidents

It is possible that compilers and readers of this volume expect the major incidents of Ranganathan's life. The justification of my preferences to minor ones has a support from Plutarch, the prince of ancient biographers, "Nor is it always in the most distinguished achievements that men's virtues or vices may be best discerned; but very often an action of small note, a short saying, or a jest, be best discerned; but very often an action of small note, a short saying, or a jest, shall distinguish a person's real character more than the greatest sieges, or the most important battles "[1]

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CHAPTER V7

A Salute to Dr Ranganathan

P P AMATYA

0 Birthday Gift

I am glad to learn that a Commemoration Volume is being prepared to be presented to Dr Ranganathan on the occasion of his 71st birthday in August, 1962. I believe it will make an excellent birthday gift.

1 Dedicated Life

I had had an opportunity to be associated with Dr Ranganathan for ten months in 1951-52 in connection with my study of Library Science in the University of Delhi. Dr Ranganathan leads a life of 'Plain living and high thinking'. In his simple dress of *dhoti* and *kurta,* Dr Ranganathan is a strict vegetarian. He has long dedicated himself to the advancement of library science and the integrated development of the library movement of India. He observes work-chastity in the true sense of the term.

2 Pioneer of Library Movement

Dr Ranganathan is one of the pioneers of library movement in India. He has waged a long continuous, and untiring struggle for it, undaunted of the strong blasts of gales, he often met in the way. In 1946, he drafted a masterly plan, a 30 years' programme for the national library development of India. His dreams are now being gradually materialised. He is happy that "the elderly statesmen have now become aware of the necessity of the countrywide library services".

3 Original, Creative and Practical

Dr Ranganathan is Library Science himself. During the last 32 years he wrote 50 books and a thousand articles covering all aspects of library science. Most remarkable point is that his works are all fresh and first-hand ideas. He is "original, creative, and above all, practical". His expressions are analytical and always clear. To my mind, he is the foremost personality of his contemporaries in the World of Library Science It goes entirely to his credit that librarianship has attained the status of Science, and it is mainly due to his persevering efforts that India now holds an honourable position in the international field of library science.

4 **Classical Works**

Dr Ranganathan's most outstanding contribution to Library Science is his Colon Classification It is the self-perpetuating scheme—the best of the published systems Ranganathan has given us most comprehensive treatises in all branches of library science His *Prolegomena to library classification, Theory of library catalogue, Classified catalogue code, Library administration, Library development plan for India, Reference service and bibliography* have all been recognized as the most exhaustive works in their respective areas His *Five laws of library science* is his first book on the subject, in which he reduces in a most interesting style, all the principles and practice of library works to five fundamental laws His *Library administration* is a best manual for scientific management of the libraries

5 **International Expert**

Dr Ranganathan is a respected international figure of library profession He made an extensive library tour and has studied and interpreted library science in several countries of the world He is member of several international library organisations like the International Committee of Library Experts of the U N, the International Federation for Documentation Dr Ranganathan's participation in all library conferences, his membership in all library organizations of national and international character are regarded as a 'must' by the library workers of India

6 **Fountain of Fresh Ideas**

Dr Ranganathan's pen is a perennial fountain of fresh ideas, which he pours forth through the organs like the *Annals of library science* The library world needs his services for many more years to come

Long live Dr Ranganathan !

CHAPTER V8

Dr Ranganathan in Banaras

B N GHATAK

0 Introduction

DR S R Ranganathan is an international figure today. He has achieved this distinction by hard work, devotion, singleness of purpose, and fortitude. The entire library world is grateful to this Noble Son of India who has sacrificed everything for the cause of libraries. It is most gratifying indeed that we are celebrating his 71st birthday; and I have been given an opportunity to express my gratitude towards him under whom I worked when he was the librarian of the B H U Library which is now piloted by Mr. P N Kaula—his ardent disciple.

Dr Ranganathan was the Honorary Librarian of this Library in 1945-47. He joined this institution after retiring as librarian of the Madras University. Prior to this, he had come to this library to deliver some lectures in the department of Library Science; but unfortunately I was not there at that time. I got the opportunity to serve under this dynamic torchbearer of our profession when he finally came here at the invitation of the then Vice Chancellor, Dr S Radhakrishnan.

1 Voluntary Probation

The day he joined, he called a staff-meeting in the library and got himself introduced to us. He said that he would remain subordinate to all the staff for one month and he would learn from each one of them. Since he could not speak Hindi, he took many of us as interpreters by rotation. Gradually he learnt a few words for his use. He was true to his word; and just after the month of this voluntary probation, he commenced his work as "librarian".

2 Re-organisation

Since 1940, this library was being classified according to the Decimal Classification; and it had a Dictionary Catalogue. He immediately brought about a few changes. He introduced the Colon Classification and established a Classified Catalogue. He had a foresight to see the advancement in university education and introduced the Classified Catalogue. This is no doubt a more helpful key to the contents of a library than the dictionary form Now almost everywhere in western countries classified catalogues have come into vogue and even America, a strong advocate of Dictionary Catalogue, is changing, though slowly. This library-prophet had brought this change thirty five years earlier in India. He also changed the charging system from Newark to Brown. The Technical Section was brought to the central part of the main circular hall, from where some of the shelves of the lending section radiated to its circumference. The charging counter was shifted to the entrance inside the Hall It was made into an island counter to economise in staff and to secure other advantages. Reference collections and the periodical publications were taken to the rectangular halls jutting out of the central hall The Centre of Activity was shifted to the ground floor, and the first floor was used as a reservoir for the less used books The practice of allowing pilgrims to walk through the reading room was stopped However the value of these rapid changes could not be appreciated in the then atmosphere of slow work, lethargy, and tradition

21 INDIFFERENCE TO INTRIGUE

After a month, Dr Ranganathan called another meeting of the staff and tried to convince all of us for the replacement of the classification from Decimal to Colon The then Junior Assistant Librarian, who was the only professionally qualified person, stood against these changes covertly and poluted the atmosphere and told many of us that the Colon Classification had no strength As none of us had any professional knowledge, we were all led away against this international figure both because that Assistant Librarian had been long with us and kept us under the conviction that he himself wielded enormous influence with the higher powers in the university But the creator of Colon Classification went on working single-handed quite undaunted by this intrigue

22 LONG HOURS OF WORK

He created three senior posts of Reference Assistants for his help in reorganisation Within one year, he reclassified three-fourths of the library and modified the catalogue He would come to the library at dawn and would leave it only by 10 p m, in darkness. During these 16 hours of daily work, we could never find him sitting idle or relaxing He was all through engaged in helping readers and whenever he was free taking out books from the shelves, changing the class number of each book from D C to C C ; and transcribing the new call numbers in the catalogue cards in the catalogue cabinets and in the shelf list cards In spite of this colossal work in progress, we were asked to put in only our normal six hours; and all the extra work was done by him alone. What was surprising to us was that he would force us to stop work after six hours; but he would never allow us to spend our time during the office hours in any other way except in library work.

3 Human Touch

He could not keep the library open on Sundays as the University Authorities did not sanction the additional staff needed for the purpose. He said that even the factory machines required a day's rest so why not human beings But he himself worked all the seven days of the week Once there was a leave vacancy for a few months. To get sanction for its being filled, it took more than a month. At the end of the month after the temporary person joined us we received our salaries as usual on the first day of the next month. But the temporary person was found in a dejected mood For, he had been told that, in the practice of the university, the first month's salary of the temporary person would be delayed by several days Ranganathan came and patted him and assured him of the payment of his salary also on that very day He went himself to the Central Office, chased his pay-bill from stage to stage, and arranged for his payment on that very day In many respects, he was not a mere formal officer signing papers The human touch in him was as remarkable as it was unusual

4 Humorous Incidents

Due to his ignorance of Hindi, amusing incidents happened now and then. Once he asked a peon to bring a chair quickly He spoke in English But the peon brought the attendance register from the office In an angry mood, Ranganathan asked him in English to go out, stretching his finger out The peon went away home He appeared the next day He called me to find out from him the cause of his disappearance on the preceding day The peon said that as he was not called back, he went home Dr Ranganathan had a hearty laugh and ordered him through me to stay for two hours more as a penalty for his absence on the preceding day

5 Dignity of Labour

One day the sweeper had kept the door-mat upside down at the entrance A peon was asked to turn it open Without doing so, the peon went out to call the sweeper On enquiry, Ranganathan learnt from the Deputy that the peon was a Brahmin, that he could not touch the door-mat, and that hence he had gone to call the sweeper With sarcastic remarks, Dr Ranganathan himself corrected the position of the mat As he himself was a Brahman, the members of the staff were surprised at his touching the door-mat. One member told him about it But he remarked with a smile "A Brahman is too clean to be polluted by a door-mat " He has been a lover of library service in the true sense His sense and practice of dignity of labour in the library is a model to all other librarians.

6 Informal Trait

He usually walked to the library bare-footed On enquiry, he informed us that library was his home and no one put on shoes when one remained in his home. When any dignitary had to come, he used to dress a little more formally. To preach library sermons, he was meeting students regularly in their respective hostels. To get back overdue books from teachers, he would go to them personally, if the reminder cards were not producing any desired effect This informal trait of his was a surprise to many in the B H U

7 Nobility and Tolerance

He is a man of principles. His superficial appearance is really one of too much seriousness Many regard him as unapproachable. But when a person speaks with him closely and on real business, he will feel the softness of his personality and the readiness to speak. This I noticed, when I asked him why he left the library "cowardly" He replied that he could have terminated the service of the central figure of the radiation of intrigue and demoralisation, but that he did not do so as that figure could not find work elsewhere and his large family would suffer, but that whenever he himself would go, opportunity for work would be plentiful and the very money he did not need would be thrust on him. Few in B H U knew at that time this trait of humorousness and tolerance in him For intrigue had put them into an unnatural frame of mind This coversation was held in my family shop This made me dumb and unconsciously tears came down I perceived his greatness, and I was ashamed for the signature put by me in the propaganda petition sent to the Vice Chancellor Noble Ranganathan consoled me by saying that the signatories of the petition were not the real culprits but the person who did not himself sign it was at the root of it Still I remained downcast for years till I washed my old sins after I saw the same cheerful face again when he came to this library on 8 September 1960 during his visit to the university as a member of its court. Thirteen long years had slipped out during this interval All through these years, his opportunity for serving the library cause had been more varied, more plentiful and truly world-wide than I imagined when he consoled me in my family shop in 1947 And the opportunity continues to be never ending for him. Money too has been falling into his lap as it were, in various capacities of his He has enriched the Madras Library Association He had filled the offers of the Indian Library Association in an unprecedented way. And yet he wielded no political influence whatever. That money has no attraction for him was seen by us by his act of 1957

I pray that God may grant him long life to show us more light in our field

CHAPTER V91

Pioneer Trustee of Library Movement in India

H K Vyas

0 Introduction

It is frequently said in some schools with some pride and satisfaction that someone may grow up to become the leader of a nation as would have been said for the Father of the Nation in the past in this country. It is equally true that there is no legal bar to anyone to be so or to achieve some other social, political, literary or library eminence. Nobody knows that one of such boys will some day be speaking for the Indian nation in the international library world, conducting affairs of library movement in different aspects and making great decisions that will make history of library movement in India for all those interested in it.

1 Greatness of Dr Ranganathan

All through the ages, great leaders have arisen frequently from the common people, regardless of their influential structure above. Certainly one of the greatest of pioneers of library movement in India, one whose impact on those interested in librarianship and the history of library movement is greater than that of most political leaders, is today Padmashri Dr S R Ranganathan, born 70 years ago in a village Shiyali in South India, became taught and the teacher, in Madras, honoured with doctorate in Library Science, represented India internationally as professor and student, as leader and librarian and a dauntless herald.

11 A HARD-DEDICATED LIFE

We are told that even as a taught and teacher, Dr Ranganathan had had qualities which made people love and respect him; especially his views on mathematical, social and educational problems and to what he undertook to do. Yet who could have imagined that this young student running about the villages preaching for progress of library movement as any bright student might do, would one day be ranked among the great librarians and pioneers of all times in the movement, and that in his name countless students in librarianship and library workers would be carrying on good work spreading the enlightenment and strengthening the brotherhood in librarians for years to come

2 Ranganathan's Unique Contributions

It would be presumptuous of me to make an analysis of Dr Ranganathan's personality, his depth of knowledge in library science, his devotion to its study and passion for creating new ideas on the subject I cannot claim fully to understand him, but I can understand and accept with all the respect that he has realised the unity which sails across the barriers of time and space, the artificial frontiers of race and region, countries and oceans, He has assimilated and made manifold varieties of library experiences and experiments, and has become the example sorely needed in the Indian Library world His charitable nature has much been taken advantage of by many and it is that charitable nature which made him to impart as much as a real Brahmin can do, and he has made numberless memorable contributions It is this selfless service to the people of his country in particular and the world in general, which made our Government honour him, the honour he rightly deserved He is now the real Trustee of the Library Movement and Librarians, who looks after the prospective future of them all in general and library movement in particular

3 Personal Life

In his daily devotion to work on hand, he has never declined to give his goodwill to meet anybody interested in the library problems His love for *Ramayana* and recitals has not broken the link for discussions on any enactment to be proposed and passed, may he be in the conference hall or for a short halt in the Taj Mahal of Bombay advised by Air India International or on the way to opening a small reading room in a small village And in his domestic life, if we cannot go too deep, we find him a most respected husband to a very kind and dutiful wife and a faithful father to a most obedient son and loved by many relatives highly placed in their jobs

4 An International Leader

As a result of tours, besides his unique contributions he has brought home to librarians, educationists and scholars an understanding and mutual respect for the library profession A few decades back there were a few foreign library experts who knew and appreciated the talents of an Indian librarian, but today he, Dr Ranganathan, has become the leader of the library profession of the world The librarians proclaim that "all classified disciplines are striving in their different ways for that one supreme experience—the Colon—towards which with the universal knowledge, the Universe evolves."

We all look forward to see Dr Ranganathan with us to greet him, not only on his 71st Birthday with an "Abhinandana Granth", but we all live to see him to have his centenary celebrations most befittingly celebrated in the International Library World Let us hope and pray to God for a happy, long, meritorious life to Padmashri Dr S R Ranganathan—the Pioneer Trustee of Library Movement in India

CHAPTER V92

Dr Ranganathan as a Public Speaker

V S Muthiah and A N Rajamoni

1 Art of Speaking

Dr S R Ranganathan has been a public speaker for years, and there are very few among the library-going public that have not heard him. His appeal is much wider than it is to a small clan of librarians. At the same time, it is obvious that he is not the kind of speaker to whom speaking is an expression, as poetry is to be a poet, or a song to be a singer. Speaking for him is only a secondary means of giving to the public what he has put into his books in a more permanent form. He is the populariser of a science of which the public knows very little, or in which it is not quite interested. He would like to share his knowledge, therefore, and by sharing commend or promote the cause which is so dear to him. In a word, the speaker is not the quint-essential Dr Ranganathan. Speaking is merely his handyman. That is why you will not find any artistry in his speaking, if we may say so without disparaging—there is no suddenly-lit phrase or sentence, with a touch of humour, and there is no eloquence. What, then, is left ? Much. The manner, for instance. He is at home on the platform and is not sure of himself that a big audience cannot intimate him; and a heckler may only cause a little stir, but cannot fluster Dr Ranganathan in the least. He is one of the cool ones of the earth, unperturbed and unhurrying in his pace. At the same time there is a glint in his glasses, showing that a heckler or anyone who wants to ask inconvenient questions, will not get away with them easily. He will soon be submerged under a landslide of Dr Ranganathan's ready answers.

2 An Endless Reel

And yet the manner is not all. Dr Ranganathan is a very acceptable speaker to modern audiences, because he can speak for any length of time without notes. In fact, he is a sort of endless reel, from which he cut out required lengths for any occasion. His ambling style is a great help to him in this matter. It carries him on from beginning to end without limping or tiring the audience. There is as little of studied care in this fluency as in his formal dress.

3 Master-Speaker

More than all these is the content of Dr Ranganathan's lectures He has an acknowledged mastery of his subject He has made it his own, and he can take you along the whole length and breadth of it with the utmost ease; blaze away statistics or with that crystal-clear mathematical mind, analyse, theorise, reduce the first principles, whatever aspect of the subject he may be dealing with at the moment Finally, the audience gets an exhilarating sense of listening to a man of wide horizons, of one who has ranged the whole earth in the course of his missionary work for library science and can bring to his talk rich merchandise garnered from East and West.

We, therefore, wish Dr Ranganathan, many, many happy returns of his platform appearances as a public speaker

PART W

REMINISCENCES

CHAPTER W1

Dr Ranganathan : A Karmayogin

T R SESHADRI

1 Homage to a Genius

It is to me a privilege to be associated with the celebration of Dr Ranganathan's birthday. One is always impressed by his great competence and originality and as years roll on his achievement in his special line is getting more and more massive. It will do us all good to pay homage to his genius and to pray that he will be given many more years of fruitful work. Should we not also pray at this period of our national history in the words of the poet "May his tribe increase".

2 Secret of Success

I am sure those who fully know Library Science will write about his great contributions. There is no doubt that he raised the wave and has been on the crest of it all the time. One is tempted to ask "What is the back ground of all this achievement and what is the secret of the success ?". There is the theory of reincarnation fairly well accepted by thinking men all over the world, but in India it is an article of faith, nay it is taken as a proved fact and it is the basis of our daily thoughts and actions. Life of the present is the result of the actions and experiences of a number of past lives. It is a continuation and except for a few blessed ones, there are future lives also for all. We also accept that environment plays an important part. But then the choice of the environment and the response to it seem to be dependent on the good work of past lives. This seems to offer an explanation of the difference in talents of even brothers and sisters and also of younger persons being often wiser and more competent than many older persons.

3 A Karmayogin

Ranganathan was born and brought up at a time when spirituality and religion still continued to be the main springs of life. The idea of secularity had not yet become popular. South India was still the land of Acharyas, Alwars and Nayanars, men and women who had seen God, spoken to Him and were living with Him. Their spiritual traditions were still alive and powerful. Worship of God and reading of the holy scriptures used to be a daily routine in every house True to this tradition, Dr Ranganathan reads the Ramayana and practises Library Science as a daily routine

It is essential for a spiritual aspirant to choose his ideal of god and worship his 'Ishtam' with all devotion and dedication He may not worship others, but he should recognise other ideals and not have any disrespect. These are the rules of Bhakti It may be said that the position is not so easy or so clear when one follows the path of Karma, the path of work The choice of work is rarely left to the individual For women it has all along been largely housewifery and for many others only hereditary profession. Even for others who stray out, circumstance or chance decides the work Logically we have to reach the conclusion that any work is as good as another so long as it is done in the spirit of worship. One should therefore be happy with the work that naturally comes to him. This is a difficult situation for the ordinary man or woman to understand and appreciate and therein lies the problem of society In our scriptures there are stories as to how a housewife and a butcher could be preceptors for a spiritual aspirant simply by virtue of their having done with devotion the work that fell to their lot

4 A Beacon Light

In this regard we have a great lesson to learn from the life and work of Dr Ranganathan He was first a teacher of mathematics Not only did he do the teaching very well, but he also worked hard to organise the profession of teaching I may here mention that in the hands of a master, mathematics can be a very interesting subject indeed I remember my own teacher on this subject at school, Mr Vembu Aiyar whose handling of the subject was as interesting as story telling Later when he was appointed Librarian of the Madras University, there existed no library science, at least in India, and there was no Library Association. They are the outcome of his genius Just as in the meditation of God, the full scope of a subject or profession reveals itself only when it is approached with devotion and dedication His is a shining example of a citizen which, if correctly followed by others, will not only solve many of our National problems, but also add immense strength to the Nation.

CHAPTER W2

The Genius of Dr Ranganathan

K S RAMASWAMY SASTRY

1 Attainment of Dr Ranganathan

DR RANGANATHAN is in many ways a loveably unique and a uniquely loveable personality. I have known him for nearly four decades intimately, as a man and as an explorer and a path finder, and later on as a specialist and yet later as a genius and a world-figure in the realm of Library Science and Library Organization. I knew him as the Librarian of the Madras University to which I used to go very often for many purposes and in many capacities. He is now the President of the Madras Library Association of which Shri K V Krishnaswami Iyer was the founder and the first President. I am one of its Vice-Presidents. I am a member of the Madras City Library Authority which has consulted Dr S R Ranganathan about its construction of a huge library building in the city of Madras and its equipment and management and to which he has given valuable advice and guidance. He has given similar advice and guidance to many universities and local bodies in India in regard to library construction and equipment and organisation. He has gone to the progressive Western countries where the library movement has achieved signal success. He has studied all the library developments there and the library authorities there have consulted him and benefited by such consultations.

2 World Librarian

He is thus a world figure and an international expert in library science. He is also the Father of the Library Movement in India. Carlyle calls a library a "People's university". In modern times, the maintenance of the highest standards in social and economic and political and cultural and spiritual life depends on the achievement of universal literacy and education on keeping such universal education alive and efficient by means of a network of libraries. Modern life and modern problems are so complex that the public in every country have to be educated and wide-awake to be able to keep abreast of them and solve them. Those who are in charge of educational and library movements hence hold the keys of modern civilisation and progress.

3 Contributions

Dr S R Ranganathan has published various books which contain his new and original and fertile ideas which will increase the usefulness and efficiency of libraries His books are studied in all the schools of library science His scheme of Colon Classification is scientific and is useful everywhere His *Five laws of library science* is equally an important landmark in the evolution of library science He has standardised library cataloguing by his method of classification and chain procedure His three-card-system for periodicals is another original and fruitful idea These and other desires of theory and technique show the originality on his ideas and the practical part of his mind He has thus placed India on a prominent position in the map of library science Nay, he has by his new and fruitful and original ideologies and techniques achieved for India an unchallenged and unchallengeable leadership in library science

4 Convincing Speaker

I wish to say also that he is a charming and a convincing lecturer, and his speeches are remarkable for solid learning and sparkling wit He is also an interesting conversationalist and is sought after in all gatherings

5 Personal Qualities

He is, further, a man of loving and loveable nature and may be well described in Marie Corelli's words as 'God's good man' He is friendly to all, and all desire and seek his friendship He is also a person full of profound intrinsic devotion to God He once arranged a series of valuable discourses on *Vishnu Sahasranama* (the thousand names of God) by Sri Sundarchariar of Shiyali, who was one of the greatest scholars and spiritual geniuses of fortune I was one of the hundreds of persons who heard, and were benefited by those discourses He can be best described in his personal life by a Sanskrit word *Sarvabhoothasuprittama* (the dearest friend and well-wisher of all)

6 Endowment

Last but not the least, I wish to say that he has endowed his fortune (a lakh of rupees) to institute a Chair of Library Science in the Madras University.

CHAPTER W3

A Unique Personality

M S EKAMBARA RAU

1 Acquaintance

IT would at all events be a bit of presumption to hope to depict justly a unique personality like that of Shiyali Ramamritha Ranganathan. As a humble offering, however, of sincere regard and thankfulness for the blessing of a personal acquaintance, this tiny flower, it is nervously hoped, will not mar the fragrance of the garland of tribute to a noble soul.

2 Contribution of Ranganathan

Dr Ranganathan's name and fame are intimately linked with the Library Movement of modern times—not only in India but in all the enlightened countries of the world. His contribution to the advancement of Library Science is both vast and original, ranging from basic principles to the brass-tacks of organization. An outstanding item is the scheme known as Colon Classification which, according to a high authority, 'is the only one produced so far which comes within measurable distance of an ideal scheme.' Besides being a precious gift to libraries, it has enhanced India's prestige for bold, original thought. It might well rank with the discovery of the zero symbol in ancient Indian Mathematics. Ironically enough, Dr Ranganathan's work is better known and appreciated outside India than in his own land.

3 Colon Classification

The supreme merit of Colon Classification is that it gives 'expressive individualizing' number to the wide variety of books and publications that fill a modern library. This is not only a valuable advantage in the easy selection of reading matter required by the readers but is in itself an incentive to the intelligent understanding of the wealth of a library.

4 Background

This individualizing quality perhaps stems from the good Doctor's unique talent for a warm understanding of persons and their problems Dr Ranganathan started his career as a College Lecturer in Mathematics His mathematical training no doubt sharpened his sense of clarity and precision which mark his activities But it is the stimulating warmth of his interest in individual students that is gratefully cherished by them To this day he is able not only to recall the names of pupils of nearly forty years age, but vividly portray their individual qualities and attitudes in the class,—even the positions of their seats. Amusing incidents there have been where the students meeting their old professor have been surprised into remembering incidents of their college days An erstwhile colleague meeting him by chance after almost four decades and yet easily recognised by name by the Doctor, felt drawn into recounting college reminiscences and at long last being interested to know the whereabouts of one Mr Ranganathan, Mathematics Lecturer, got the rum start of his life to be told, 'Why, you see him standing before you.' As a lecturer, Dr Ranganathan experimented with unorthodox methods of teaching and testing—an original version of the Dalton Plan—whereby he could reach every individual student, appreciate his capacities and inspire him to fuller self-expression

5 Library Science

It is no surprise that, when the opportunity came his way , Dr Ranganathan switched his rich creative talents on the sphere of libraries—potent instruments of self-education Though Library Science became the special field of his labours, his is no one-track mind of the specialist and the expert His interests have been wide and catholic. His monumental works on Library Science, covering the full range of its applications to social and cultural life, are couched in simple, elegant and charming style without detriment to scientific treatment *The five laws of library science*—a basic work giving the *Panchashila* for the library world—has all the fascination of a fairy tale, revealing the simplicity and profundity of the author's intellect no less than the inspiring warmth of his comprehensive wisdom and missionary faith and zeal

6 Versatility

It is in his private life and personal relationships that Dr Ranganathan's all-embracing humanity shines best. He is a man of incredible simplicity in dress and habits, least conspicuous or embarrassing in company His diet for the day is restricted to a light breakfast and a noonday meal, his beverages being of the mildest to the exclusion of even coffee (and he, a South Indian.) or tea, of whose very taste he is yet blissfully ignorant. But he has made himself quite at home in his travels and sojourns abroad He moves on most easy and friendly terms with all—young and old, pupil and dean, peasant and prince, countryman and foreigner He is shy and unostentatious—almost to a fault. A distinguished foreign visitor to the Madras University Library, anxious to meet the Librarian whose name and fame had come to his ears, found a good bit of his time wasted in being ceremoniously taken round the library corridors by the Vice-Chancellor who had forgotten to introduce the Librarian accompanying them in the rear. His affection for the institution, which he long served with faith and devotion as to put it on the map, prompted him to gift an endowment of a lakh of rupees (a generous slice of his savings) on the occasion of the University's Centenary for founding a Chair of Library Science named after his wife This simple lady, with few pretensions to literary interests, is an understanding helpmate to the good Doctor When the couple are together, not a day passes without the doctor reading verses from the Ramayana or the Gita to the keenly interested listener His private conversations like his public lectures, clothed in clear, chaste diction are charmingly enlightening With an encyclopaedic knowledge and a marvellous memory, he is able to discourse on many a subject with confident ease and authority With a seemingly orthodox exterior, his outlook is refreshingly free from the least tinge of superior exclusiveness in thought and in practice—a true Brahmana and a wise Acharya His passion for the welfare of the library movement in our country induced him to accept an invitation from the Local Library Authority of South Kanara to inaugurate the first Library Week in 1958 His blessings overflowed the formal opening function to the very close of the week in a series of off-the-schedule engagements wherein he radiated the warmth of his kindly and versatile personality.

7 Greetings

The library world hails with joy and gratitude the seventy-first birthday of this great savant In him are sweetly combined the glowing enthusiasm of youth and the gentle wisdom of age May he be blessed with many more years of active inspiring guidance to the Library Movement !

CHAPTER W4

A Tribute of Reverence

D SUBRAMANYAM

1 Administration and Desire

IT was as early as 1926 that my admiration for Prof S R Ranganathan commenced after reading his interesting articles and lectures on Library Science published in the *South Indian teacher* and the *Educational review* of South India. I was already appointed as Assistant Librarian in the Banaras Hindu University. Possessing a keen interest in the advancement of librarianship, I requested the late Prof P Seshadri, the then Vice-Principal of the Central Hindu College and Head of the Department of English to recommend me to Prof Ranganathan for a place in the Madras University Library. Unfortunately, there was no chance as he had already appointed a band of workers under him.

2 Opportunity to Serve

The dream, I cherished, for serving with him was fulfilled at the time of the first "All Asia Educational Conference, 1930", held at Banaras, when I happened to be the local secretary to the Library Service Section under his able secretaryship. His qualities of head and heart, simplicity, affability, indomitable will power and bubbling enthusiasm attracted me and a kind of deep reverence and hero-worship grew day by day.

3 Architect of B H U Library School

Under his fostering care and advice, a firm foundation for the Department of Library Science was laid in the Banaras Hindu University in the year 1941. It is unique that the B H U was the first among the Northern Indian universities and second in India as a whole to introduce library science amongst its disciplines through the great foresight of the then Vice-Chancellor, Sir S Radhakrishnan. Prof Ranganathan was kind enough to be a member of the Board of Studies and Examiners of Library Science all along and guided it in the right direction.

4 Desire Fulfilled

In 1946, we had the fortune of having him as the Librarian of the B H U and serving him—the fulfilment of a long-cherished desire—but alas it was only for a short time

5 Loss of B H U

Sir Maurice Gwyer, the then Vice-Chancellor of the Metropolitan University of Delhi, attracted him and appointed him as the Professor of Library Science—a Chair which he created specially for him A degree course leading to M Lib Sc and PhD was instituted for the first time in the annals of the Commonwealth and he was the first librarian to be honoured with a Doctorate in India The B H U was unlucky in losing him Though this was a tremendous loss to the B H U, it was an infinite gain to the Delhi University and to the world

6 International Recognition

It also paved the way to his international fame. His research work in the Department of Library Science and his efforts to bring the profession into lime light in the international meetings have laid the world under a deep debt of obligation and gratitude

7 Chair in Library Science

His unfathomable love to the foster child of Library Science is such that for the first time in the world an endowment of a lakh of rupees—the hard earned income accumulated from a meagre salary of the then librarians—for a Chair in Library Science—in the Madras University wherefrom the major part of his intellectual activities emanated

8 India on the Library Map

The heights attained by great men are not attained by a sudden flight They are attained by a life-long *tapas* for a noble cause It is entirely due to his strenuous work for nearly four decades, that India occupies a prominent and distinguished place in the Library map of the world For a scientific and systematic study of library science the student, to whichever land he belongs, has to look up to India for inspiration

91 Blessings from the Lord

May Lord Viswanath bless him with the full span of life with happiness and peace and service to God through service to humanity ! May this Vedic ideal:

ओ ।। सह्नाववतु । सह्नौयुनक्तु । सह् वीर्यंकरवावहै ।
तेजस्विनाव धीतमस्तु माविद्विषावहै । ओ शान्ति शान्ति शान्ति ।।

be cherished by his disciples to get the required inspiration for the propagation of Library Science !

CHAPTER W5

Reminiscences and Felicitations

ARNE KILDAL

1 First Contact and Impression

MY FIRST remembrance of my good friend Ranganathan dates from the early autumn of 1948, when the UNESCO held its first International Library Seminar, starting in Manchester and ending up in London. The Seminar had its ample headquarters in the university buildings of the former city and numbered around fifty participants, representing in all thirty nations. The seminar staff consisted of five members, of whom one was an Indian and one a Norwegian, the former being Dr Ranganathan and the latter myself. Being fellow members of the staff, we cooperated closely for the benefit of this early experiment in international librarianship, and my Indian colleague made a deep impression on me, both in the capacity of a very learned librarian and as a vigilant human individual.

2 Prominent Expert

In the course of several years, his professional studies and activities developed him into a prominent expert in the field of library work, and it appeared that the difficult branch of classification caught his most special interest, resulting in the writing of a number of books, essays and articles on the subject. His works on the "Colon Classification" demonstrate a sincere wish to expand the usefulness of the Decimal Classification system, and his interest in this subject led to very fascinating discussions during our sojourn in Manchester. As one of the very few surviving pupils of the famous Dr Melvil Dewey, I was apparently considered a valuable participant in discussions of that nature, and he never gave expression to any disappointment in the wanting professional qualifications of his foreign combatant.

3 Far-Reaching Knowledge

In discussions and lectures, Dr Ranganathan revealed far-reaching knowledge and keen intelligence, not merely in the professional field, but on a general plan as well. His lectures interested the audience, and many of the students expressed the opinion that they were stimulating, and even inspiring when he manifested his profound and captivating philosophical views in his remarks

4 **Rich Human Values**

From the human point of view, it was always a pleasant experience to associate with Dr Ranganathan He was ever genial, in good spirits, harmonious, with a glint of humour in his eyes. His courteous manners and his sincere desire to assist in difficult situations made him popular at the international gathering referred to As a consequence I had the good fortune of developing a personal friendship with my Indian colleague, founded not merely on common professional interests, but even more so on respect and appreciation of the rich human values that were embodied in his personality

5 **Greetings**

When Dr Ranganathan now turns a milestone, I send my greetings across land and sea, wishing him on "*otium cum dignitate*" and thanking him for his highly valuable contributions to international librarianship and for a sincere friendship which has continued during the years in spite of distances of place and time

CHAPTER W6

On First Seeing Dr Ranganathan

M A RAZZAQUE

1 Dr Ranganathan in New Castle

IT was the month of December 1956. I was a student in the School of Librarianship, New Castle-on-Tyne. Mrs Mitic, Lecturer in the School, informed us that Dr S R Ranganathan was coming to visit the library school. This created a sudden excitement among students. All of them looked at me and many of them began pouring questions on me regarding this great librarian. Unfortunately I could not satisfy them as I had no opportunity to see the man before, and I had heard of him very little. This information came to us some weeks before and in those days we were eagerly waiting to see and hear him.

2 Personality

One morning Mr Caldwell, Head of the School, entered the class room with one Indian gentleman with turban on his head, longcoat and dhoti covering his mediumsized body. Peculiarly he had a tie on just to save his throat from English cold. He had *Tilak* on his forehead. He was Dr Ranganathan who devoted his undivided attention to library science and library development in India. He may justly be called the "Father of Library Science" in India.

3 Method of Speaking

After an introduction, Dr Ranganathan started speaking. At the very outset I was charmed by his mode of speaking, sweet tongue, and occasional humour to lighten the dry subject like cataloguing and classification. He followed the Socretic method of teaching by question and answer. Then questions were showered on him and he answered every question very plainly. Difficult titles were placed before him for classification and he classified them according to Dewey, U D C and in his own Colon. He demonstrated the advantages of Colon over others, and showed how Colon could express the various facets and phases of a subject.

4 Personal Interview

At tea break I was introduced to him and he talked with me for a few minutes While I told him that I had no previous experience in library work, he put it very nicely thus, "It is good that you have come with your bottle empty Now fill it up with fresh knowledge "

5 Bundle of Energy

In the evening the discussion continued but alas he lost his voice Still he did not stop He used to whisper to Mrs Mitic who used to resound to us In this way he continued for three hours

But that could not stop the speaker In the evening a vast gathering of practising librarians of the whole of Durham and Northumberland counties were waiting in the Newcastle City Library There also he needed an interpreter How energetic and enthusiastic this vegetarian Brahmain is

6 Another Opportunity

In the spring 1959, while I was a student of Manchester Library School, Dr Ranganathan was scheduled to visit English library schools on his way home from the U S A, but unfortunately for us he dropped this plan and returned home *via* Japan Again I had the opportunity to see this illustrious figure in October 1960 at a reception given by the Delhi Library Association to the delegates of Unesco Seminar on Library Development in South Asia

Dr Ranganathan is ever jolly, lively, and hard working even in his old age

7 Dedicated Life

He is an inspiration to all in the profession His scores of books, hundreds of articles, lectures, tours, besides his long service as a practising librarian convince us how active and devoted he had been althrough his life

CHAPTER W7

Librarianship in Me

D KRISHNAYYA

1 First Opportunity

IT was in the year 1934 when I had the opportunity of attending the Christmas Course on "School libraries and library hours," organised by the Madras Library Association that the spark of librarianship in me was kindled into a tiny flame by the eloquent and thought provoking lectures which Mr S R Ranganathan gave us for over a week. As teachers we could all understand how richly experienced and practical his talks were and we gratefully acknowledged our thanks to the learned lecturer on the concluding day; and some of us requested him to recruit us for the Certificate Course in Librarianship by which we ardently hoped to have brighter opportunities of being with the professor for about three months and learning the technique of library science.

2 Second Opportunity

That unique chance of undergoing the Certificate Course in Librarianship came to me only in 1936 and even after the lapse of full twenty five years, the talks on the technique are still ringing in my ears and wherever I am, they are with me. Fortunately for me for all these years from 1934 up to date, I am ever associated with that mighty magnet of library science as in the magnetic field and iron filings.

3 Magnetic Touch

As the outcome of this magnetic touch, I ever live in the field of library science and the varied aspects thereof. How best any teacher can be a true librarian and serve the pupils and how the school and the library are interrelated and how a teacher can be true librarian are some of the aspects which I was able to gain from my professor and like the dispersal of the seed, I have piously contributed several articles on the subject to the educational periodicals of South India. Through the *Educational review*, *South Indian teacher*, *Educational India*, *Indian educator*, *Advance India*, *Scholar*, *Sun-shine* and several other vernacular periodicals, I have pointed out the potentialities of the subject in a popular manner For some years, I even edited a manuscript periodical on Library Science and received due appreciation from certain educational exhibition authorities besides the public and the press Tears of gratitude roll in my eyes as I write this

4 Gratitude Expressed

In 1942, when the twenty fourth session of the Andhra Desa Library Association was conducted at Hindupur, I was able to express my gratitude to my professor by requesting him to inaugurate the session which he so willingly accepted in spite of his ever busy programme just to grant the wish of his old pupil The procession in a chariot drawn by a team of twenty four bulls, which the professor says, he ever remembers being particularly unique in all his national and international tours

5 Other Opportunities

The photo print of Dr S R Ranganathan is ever before me and he is ever in my heart of hearts Quite recently, on the railway platform at Hindupur, the Dr cheered me by lifting up his right hand which is *the hand of the library science* pointing out the Five Laws of library science In December 1959, in the District Library Conference at Anantapur, I had the proud privilege of reading a paper on "The why of the open-access system," with Dr S R Ranganathan in the chair and these pleasant occasions flame up the spark of librarianship in me

6 Felicitation

I am young and enthusiastic in the line though I am past sixty two and offer this in the most sublime manner as my very humble contribution to the *Commemoration Volume* of Dr S R Ranganathan on his 71st birthday.

CHAPTER W8

Acharya Ranganathan

B K DATTA

1 Creator of a New Age

ACHARYA RANGANATHAN's monumental work in the field of Library Science will be written with golden letters in the volumes on the growth and development of Indian Education and Culture. Acharya Ranganathan's contribution ushered a new age of logical thinking based on nationalistic outlook. He inspired a new generation to work hard to liquidate illiteracy and to disseminate knowledge; and infused them with energy and zeal to build up an up-to-date school of library science. He is an example by himself and truly personifies the saying:

"*Deep se deep jale.*"

2 Indefatigable Worker

As a selfless patriot and valiant worker, he toiled hard for the last thirty years to re-write a science and to uplift the status of a noble profession. For these he had to face sufferings but was undaunted. His cause reminds us of the following lines of Poet Tagore:

"If they answer not to thy call, walk alone,
If they are afraid and coward mutely facing the wall,
O thou of evil luck,
Open thy mind and speak out alone.
....
....
With the thunder flame of pain ignite
thine own heart
and let it burn alone."

3 A Savant

Acharya Ranganathan struggled hard and through the pain and sufferings he gained new strength to go ahead. At last he won, revitalised a noble profession and remodelled a science with new Oriental flavour He thus, was recognised all over the world for bringing emancipation of an important branch of knowledge from the clutches of foreign yoke

4 World Librarian

As a constructive worker all through his career, he tried his best and is still trying to enhance the prestige of Indian librarians As a member of the International Committee of Library Experts of the United Nations and of the International Bibliographical Committee of UNESCO, he helped the librarians of the world to solve their problems

5 Unique Contributions

Acharya Ranganathan invented the Colon Classification, a new system and published nearly fifty volumes and innumerable articles containing original thoughts and new approach The world is proud of Dr Ranganathan's contributions. His contributions enriched India's prestige abroad

6 New Light

Acharya Ranganathan showed us new light, new approach and new way of scientific thinking.

He is our pride and joy.

May God give him long life and sound health!

CHAPTER W91

My Initiation to Library Profession

JAGDISH SARAN SHARMA

1 Invitation to Ranganathan

IT was about 5 P M. I was absorbed, almost 16 years ago, in reading preliminary material in the reading room of the Delhi University Library towards my Ph D Thesis entitled 'Pherukhshiar,' one of the later Mughals. Mr P K Garde, who was in those days working in the University Library and was more popular among the research scholars, came to me along with another research fellow in History, and asked if I was interested in attending the lecture of a distinguished librarian of our country, who had come as a guest of Sir Maurice Gwyer, the then Vice-Chancellor of the Delhi University. I was a little hesitant, since I had to finish one chapter but I could not resist much when Mr Garde said that he would love to hear an inspiring and learned lecturer, who was the Father of Library Science in India. Within a few moments I returned the book which was from the 'Reserve Section' and went along with him. The hall which was built almost 50 years ago, was a smaller one, but more dignified and beautiful. Distinguished guests were seated in the front row and teachers and students were also there and the hall was almost packed to its capacity. After an introduction of the distinguished guest by an official of the University, the speaker who was putting on a white turban, the usual South Indian dress, wearing 'Tilak' on his forehead and spectacles, emerged out of one of the chairs on the dias and started speaking on the Importance of Library Science. It is not possible for me to reproduce what he said. But this much I can say that he spoke very fluently.

2 Ranganathan's Address

Dr Ranganathan explained his experiences of visiting some London libraries and his training in librarianship there. He also mentioned how he organised the Library of the Madras University. He explained his scheme of Colon Classification, his writings especially *Five laws of library science.* He expressed in brief his views on the condition of the library profession in our country and convinced his audience that if India was to progress mentally, it was very essential that library profession should take its due place. He said up to this extent that "if *Moksha* was to be achieved, adopt library profession". There was a pindrop silence in the meeting and everybody was stunned to hear such a bold statement, which to some persons was unbelievable. I was one of them who was not convinced wholeheartedly with what he said.

3 Struggle in Mind

After the meeting, I came out along with my friends and went home. The words uttered by this Great Librarian were resounding in my ears and their spirit was lingering in my memory. Being always a sensitive mind, I just could not ignore those ideas and continued to think over as if there could be some truth in what the speaker said. Next day, as usual, I came to the library and took the same book which I was reading the last evening in order to complete the chapter. In the afternoon, as usual, I along with Mr Garde, went to take my coffee in the University Branch of the India Coffee House. It was natural that we discussed some of the points raised by the speaker last evening. Since those ideas were reigning supreme in my mind, I was anxious to meet the speaker, in case it was possible. Mr Garde told me that it was not difficult to meet him since he had been invited that evening to address the library staff at 4 P M. That was a happy news to me. After the meeting was over, it was followed by light refreshment. During that time as it happened, people met each other in order to exchange ideas. I was one of the persons who were introduced to the distinguished guest. Since last evening, I was trying to arrange my confused ideas. Now I thought that this was the right opportunity to clarify them after speaking my mind to the originator of that confusion. I told him how *Moksha* could be achieved by simply being a librarian and not a *Saint* or a *Bhagat*. He was full of humour when he heard me. In a very simple and straightforward manner, he told me that library service is most impersonal service and if somebody does this service with devotion and pure heart not thinking of colour, creed, caste, religion, richness, the ideology of his readers, he does a real service to the humanity. Since there are no strings attached to his service as it is in the case of the great men of the past who always served humanity by their service and noble ideas, they live for ages even though they do not exist in the physical form. After all this body (*sharirah*) which will be destroyed one day, will be destroyed in any case, but one's service to humanity is not destroyed neither by the time nor by any war or any catastrophe that can happen in this world. A librarian who serves his readers with this spirit, attains *Moksha*.

4 Feeling of Influence

DR ranganathan's talk left me more confused and I began to feel that library profession is something worth adoption, but how I could adopt it, since I was doing my research work and I wanted to become a teacher in a University.

I was also dreaming to go to London University and take my Ph D in History from that University The preliminary work for admission was already completed

God wanted something different. India was partitioned and my advisor under whom I was doing the research work, preferred to leave India and make Pakistan his mother-land which he lately did I was left without a proper guide My interest in the subject of my research dwindled, and the flame of love towards library science rose higher and higher But how could it be practical in the University of Delhi where there was no provision for the teaching of library science unless I chose to go to Madras

5 Initiation into Library Science

Fortunately enough, there was some tussle going on among my future plans, a good news was conveyed to me by Mr Garde and my teacher Mr S Das Gupta The news was that the Department of Library Science was being instituted in Delhi University with that distinguished speaker as an Honorary Professor and Mr S Das Gupta as its Head and Shri Garde as one of the teachers One can imagine my state of mind when all such things happened at one and the same time I wrote down an application for admission to the course and I was straightaway selected It is this way that I was initiated into the Library profession

6 Further Study

I have stated earlier that I wanted to go to London University to do my Ph D in History, but after I got myself admitted to the Diploma Course of Librarianship, my interest shifted to the United States since I was told that United States had better facilities in the training of librarians I started correspondence with many universities of the United States who offer courses of study in library science Here I would like to mention one more thing I was told that a letter from this Great Librarian would help me immensely I was little hesitant to go to meet him because I learnt that it was difficult to approach such an eminent person but to my great surprise when I went to see him, he was very cordial and kind and on my request he dictated a letter which I got after an hour That was a wonderful letter which I treasure most even today The other two well-wishers who kindly gave me similar letters are Dr V K R V Rao, former Vice-Chancellor of the Delhi University, and Professor S Das Gupta, Librarian of the Delhi University, (Now on deputation to the Kurukshetra University as Development Officer) I got my admission, went to the United States, got training and came back to India after having obtained M A and Ph D in Library Science from the University of Michigan

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7 Influence of Ranganathan

You must be wondering who is this Father of Library Science who initiated me to Librarianship He is *Padmashri* Dr S R Ranganathan on whose 71st Birthday we are presenting this *Commemmorative Volume*

CHAPTER W92

Four Days with Dr Ranganathan

D P SHASTRI

0 Professional Career

FOR the last twelve years I have been working as a Librarian in the Hindi Sahitya Sammelan at Allahabad, an organization renowned throughout the country for the advancement and expansion of the national language—Hindi. During this span of time, my humble service to the Hindi literature has been the contribution of books on library science, a sphere in which very few books had ever come to light. Some of these books have been awarded prizes by the Government of Uttar Pradesh. With a view to create conditions for the library movement, I had arranged with the cooperation of my friends in the profession, a training centre at Allahabad for imparting training in library science.

1 Guru in Absentia

I had read some of the books written by Dr S R Ranganathan in English. I was impressed by his writings. In one of the periodicals, I saw his photograph and was so much impressed by his personality that I took it out from the magazine, and got it framed and hung in my study room. I had neither the privilege nor the opportunity of being his student. Strictly speaking, therefore, I was not in a position to claim him as my '*Guru*' though of course, I admit, I had gained much from his writings. So a longing grew in me to have a '*darshan*' of such a sage who literally gave up all for the cause of the library movement. Fortunately this opportunity was provided to me by Prof S Bashiruddin, Librarian of the Aligarh University.

2 An Opportunity

It was an evening of December 1959. A symposium was going to be arranged in the new stately American styled building of the Library of the Aligarh University. Prof Bashiruddin had included my name among the participants for the symposium. A little earlier I had gone there to deliver my lectures on the 'Indian Library Movement' to the students of the Degree and Certificate course. The students appeared gentle, studious and curious to gain knowledge.

The teachers were also very social and generous Even then there were several difficulties of my own in joining the symposium My child at home was not well then. A huge work in the library was awaiting disposal I was writing a book on Reference Service and had to collect matter for it Earlier I had missed a chance of meeting him. I was once contemplating to introduce and adopt the Colon Classification scheme in my library. So I wanted to have some suggestions from Dr Ranganathan Dr Sahab happily agreed to give me time for a month But due to some difficulties I could not go to him. He flew for Zurich and returned home only after a long period So I did not like to lose the opportunity offered by Prof Bashiruddin. At last I decided to go to Aligarh. This was killing two birds with one stone—to participate in a symposium and also to meet Dr Ranganathan What a golden opportunity it was!

3 Introduction with Ranganathan

When I reached the University Library, I found that a stranger was standing in the midst of an admiring throng Middle statured, with shining face, and a wide forehead with a white *Vaishnava* cast mark vertical in shape like moon, beautiful spectacles on his radiant eyes, wearing *dhoti* and putting on a *dupatta* on his shoulders, a wrist watch on his wrist, contributed to this happy personality He was just like an ancient sage with a little modification, but he spoke English with natural ease and fluency as if it were his mother-tongue His oriental appearance and his flawless English afforded a curious contrast I could not guess who this person could be. I argued that he could not be Dr Ranganathan whose photograph in western dress I had seen in the *Indian librarian* when he had received his Doctorate I was searching him in English dress on the basis of that photograph In the meanwhile Mr M H Rizvi pointed out to Prof Bashiruddin that Shastriji had reached there On seeing me, Prof Bashir Sahab exclaimed, "Hello, Shastriji ! I have been waiting for you since last evening " Then pointing towards the stranger who had gripped my attention, he stated, "This is Dr Ranganathan " Simultaneously he introduced me to him by saying that, "he has keen interest in the library profession and has written several books on library science Just see how he has come even in this severe cold "

4 Recognition of Services

I bowed my head low before that person in reverence, and began to listen to his conversation with other persons. But somehow my mind did not remain calm It was thinking, 'Is this the same person who has written thousands of articles and nearly fifty books on Library Science ? Could this be the person who had flown to America and Europe to attend the library conferences ? Is this the person who had been the Head of the Department of Library Science in Madras, Banaras and Delhi Universities ? Was this the person who was awarded '*Padmashri*' in honour of his services rendered for library science, Chairman of Library Committee of University Grant Commission and the *donor* of a lakh of rupees to the Madras University for establishing a Chair in Library Science which he could collect by living very frugally

5 Conduct of the Seminar

This seminar ran for four days packed with many important topics The central figure of this symposium was however the towering personality of Dr Ranganathan with Mr M H Rizvi, Mr T P Saxena, Mr Saffuddin, Lecturers in Library Science in Aligarh University, and the students as well as persons interested in the subject who had come there from Lucknow, Delhi and other places Long and learned speeches were delivered The lecturers were full of details, logical and scientific But all waited breathlessly for a decision from Dr Ranganathan as in our Assembly, members await the decision from the Speaker

51 METHOD OF TEACHING

I found that even at the age of about 70, Dr Sahab worked hard and spoke, if occasion required, from morning till 8 or 9 in the night He has a power to clarify a subject which is difficult to be understood easily, in a very simple and straight forward manner To prevent people from feeling bored, he used to supplement his talks with humorous incidents and many memorable snippets from his tours of foreign countries In this way we hardly knew how those four days just passed away I felt that even in this age there is unique power in Dr Ranganathan for working He never felt tired He worked till one o'clock in the night but without the least effort or tension. He spared time to see persons desirous to meet him in the guest house for solving certain problems and for giving good advice

6 Personal Qualities

61 SINGLE MINDED DEVOTION

Dr Ranganathan is an expert speaker as well as a good teacher and a fine interpreter of his subject in a very impressive way His style of making people understand his thoughts is unique No body feels bored in his presence He at once catches hold of those persons who tend to lose interest by directing his questions to such persons and in some way or other he brings them round to become equally alert and interested but he feels very happy in his heart He has a power to raise the standards of low people He emphasises on self-study and it is his belief that people come in contact with new things by reading, speaking and writing. Quoting a personal experience of his own, he remarked that last year while speaking in the Vikram University, he found a student who put a question to him which gave birth to a new chain of thought regarding classification. He believed that people should not feel discouraged before certain knotty problems but should always meet them with full confidence and a cheerful spirit It is true that every problem poses a challenge and how you respond to that challenge is the history of the growth of thought Dr Sahab is a living symbol of simple living and high thinking He is intensely religious minded person having not the least trace of pride in him He is twenty four hours busy in making out plans for the improvement of his profession It was said of Edison that he never did a minute's work during his whole life though he used to be so absorbed in his experiments for 20 hours of the day He is far from the worldly tricks He is like a *Nirasakta Yogi*—only believing in the performance of his duties well having not been anxious about the results of his works I was a little surprised to know when Prof Bashiruddin told me that during his four days stay at Aligarh with him, he did not ask him how he was, how many children had he and what were they doing etc Such was his close absorption in his profession, that he could not even think of any other things

62 HUMANE IN OUTLOOK

Dr Sahab is very kind at heart He always respects the feelings of his students and colleagues That day it was the time to start for station. There was hardly time to reach the station when he stepped into the car At that moment his student Mr Rizvi requested him that in spite of the fact that he had not a single minute to spare, his wife wanted to have a '*darshan*' of Dr Sahab At once Dr Sahab asked his driver to turn the car towards Mr Rizvi's residence He stepped out at the gate and met the wife of Mr Rizvi After blessing her and her children, he started for the station

63 ABOVE CRITICISM

Dr Ranganathan is never afraid of criticism I recall the occasion when I suggested that in spite of giving his precious time in the discovery of new canons he should devote his time in the preparation of the most current edition of the Colon scheme, which would be more profitable for all the librarians of main Indian languages, especially Hindi libraries It started a lively and heated discussion. Mr R S Saxena and I had been discussing for a long time on this subject, when Dr Ranganathan pointed out with a smiling face that such work was to be taken by people like myself It had been even done in Tamil and Marathi.

64 HUMOROUS NATURE

Dr Sahab is a person of very frank and humorous nature When we reached Aligarh Station to see him off, it was difficult to get accommodation in the First

Class compartment Mr Saxena found that a compartment had some room but the gentleman who was sitting in it told on enquiry that those seats were reserved and there was no possibility for making room for him. Mr Saxena began to despair and informed Dr Ranganathan about it. But as Dr Sahab reached in front of the above-mentioned compartment, that very gentleman called out 'Hello, Dr Ranganathan! How do you do ?' He paid his respects to him and insisted upon his sitting in his compartment. Dr Saheb accompanied him and remarked, "Is this the same Ranganathan for whom there was no room in this compartment only a few minutes back?" On this all of us began to laugh in which the gentleman also joined but with some sorry face.

Just a trifling incident will show that though always busy in his work and thoughts, he is never oblivious of the rules of simple formality. Thus while leaving the Guest House, he called for the attendant and gave him '*bakshish*' from his own hands, even though the attendant had already been paid by Mr Saxena and Dr Sahab was aware of it

7 Multifaceted Personality

In this way I found that the personality of Dr Ranganathan is great and multifaceted His smallest things are the greatest Even in his ordinary talks there are points and plans for our guidance We can learn a great deal from them As there seems no successor in the field of politics after Tilak, Gandhi and Nehru, in the same way who will fill his place after him ? May God bless him with a long life!

8 Torch Bearer of the Profession

One of the few remaining stalwarts of the grand old type of Indian culture, possessing a rational capacity to influence men commands spontaneous respect and affection from all A torch-bearer of the library movement, a wise leader of clear foresight and vision, and a model debator endowed with a prodigious memory, clear analytical skill, he readily grasps the essential points of a problem however obstruse and confusing it may appear to be His easy manners, well known reasonableness and amiability never desert him amidst what appears to be insurmountable difficulties

CHAPTER W93

Ranganathan : The Magic Man

AROON V THAKORE

1 Yogi of Librarianship

THERE is a touch of the magician on Dr Ranganathan's personality. How different he is from the Westernized foreign returnees; men who frequently betray a superficial knowledge of librarianship and the working of whose libraries shows marks of the bogus and the incompetent ! Ranganathan is not a fake. He is the genuine article. A true librarian in the tradition of Sayers, Brown, Esdaile, Dewey, Putnam and Dana. Yet the nature of his librarianship reflects the glorious culture of our Motherland and her magnificent contributions to world civilization. Our *Shastras* describe the *Yogi* as a person who has completely yoked himself to the object of attainment. In this sense Ranganathan is a *Yogi* of librarianship. The *Sadhak* is one with the *Sadhya*. His *Tana*, *Mana*, *Dhana* and *Samaya* all have been given up to the field of library science.

2 Delightful Teacher

In New York in 1950 when I had the privilege of meeting him, I felt that here was a personality that exuded a sort of vitality which irresistibly affects others. He showed me a glimpse of the paradise lying in the work of librarianship as carried out under proper circumstances. In addition to being a great librarian, Ranganathan is also a delightful teacher. He makes difficult subjects simple. And his mind always probes towards basic concepts which would remove the various defects which are inherited in some of our traditional library practices. When I gave him a book on Semantics by Korzybsky to read at night, he immediately got absorbed in it. Full absorption ! The absorption of a *Yogi* ! And next day he was evolving its implications for the language of classification.

3 Secret of Stupendous Achievements

What is the reason behind his achievements ? I think it is known to most of us. Ranganathan is a deeply religious man reflecting the best traditions of

Indian culture, and perhaps the daily deep installation of his mind and soul in the holy Valmiki's *Ramayana*, is the secret of his stupendous achievements In Gujarati there is a saying

Jene Ram rakhe, Tene kon chakhe ?
(He who is protected by God, who can attempt to conquer him ?)

CHAPTER W94

A Word of Tribute

BRIJ NANDAN PRASAD

1 Savant of Library Profession

AFTER just appearing at the Diploma Examination in Library Science, I had the good fortune of attending the Indore Library Conference in 1951, being deputed by the Government of Bihar. There I had the first opportunity to pay my humble respects to Dr S R Ranganathan, the pioneer of library revolution in India. I was amazed at his simplicity and agility at that old age. How much respect I gathered for him by reading the Colon Classification scheme taught by Shri D Subramanyam, the then Head of the Department of Library Science at B H U ! A man of mathematics, jumping to the profession of library service, is quite unique. He has raised this profession in the eyes of the world to a great height. This is one of the noblest professions which can be thought of. We bow down before him. May God give him strength and longevity to guide us more in future years ! The library profession has played a great part in social revolution. Society is to be changed. Unless there is some jerk in the firmament of social structure, it will ever remain dormant and lifeless. It is Dr S R Ranganathan, who has brought vitality and life in the mental horizon of social structure.

The history of Library movement in India of the last 30 years, is inextricably wound up with the life story of Dr Ranganathan. He is a man of exceptional character and wisdom.

2 Personal Qualities

He has greatness of mind to rise above any pettiness. I have great admiration for his achievements and respect and affection for him as a greatman. He is loyal not only to his ideals but to individuals in the profession. He has sacrificed his every thing for the development of library science.

May he live long to see the banner of Indian achievement in library science flying! This is the prayer of all of us from the very core of our hearts.

CHAPTER W95

A Tribute to Dr Ranganathan

K BALASUNDARA GUPTA

1 Creative Mind

INDIA has been contributing to the world of ideas that powerfully move the world and men. Some of them are very original and abundantly provocative; engaging the thinking minds to think and to have a sort of invisible battle of ideas in their minds. To such a line of contributors, Dr Ranganathan belongs.

2 Doyen of Librarianship

He has distinguished himself as the doyen of Indian librarianship. It is needless to expatiate on him or on his formidable achievements in the field. His works reflect his cultivated love for books and indefatigable desire for propagation of librarianship, specially in India. He is the most energetic and dynamic personality one could encounter in the profession.

3 Original Scheme of Classification

He has given an everlasting gift to the world of libraries in the form of a classification schedule. This artifice has the remarkable features, flexibility of notation, co-extensiveness to translate the complexities of human thought to readable notation specially, well suited to Indian thought.

4 Versatile Personality

He, gifted with a keen and analytical mind, has shown to us the impending need for unification of library service in India. His demonstrations are those of a scientist; his documentation is that of a scholar; his manner is that of an artist; and his eloquence is that of an orator.

5 'Panchasheela'

He lit the torch of librarianship in India for more than a generation ago and he has been making pilgrimage from the Himalayas down to Kanyakumari to spread the gospel of 'PANCHASHEELA'—Five Laws of Library Science To talk to him is to drink the bracing waters of a spring and to read his works to taste the dews of immortality

With ardour we hope he will be with us for many more years to inspire us as guide, friend and philosopher. Amen !

CHAPTER W96

An Estimate of Dr Ranganathan

B Sanjiva Rao

1 Man of learning and wisdom

Dr Ranganathan is a celebrity in the world of letters perhaps more correctly in the world of books. He has never sought fame. But fame has sought him. He is held in great respect because of his vast learning. All the great centres of learning have invited him to address them. He is one of the most accessible of men. He is consulted by every one almost on all subjects of human interest. It is stated that a businessman, the head of a large synthetic diamond factory, became interested in library science, because an assistant in the library attached to the factory collected some information which saved the proprietor thousands of pounds. The assistant tells him that it was Dr Ranganathan's system of classification that enabled her to obtain this information.

2 Insight of Religion

It is however another aspect of his work that is of a deeper significance. During a visit to Sweden, he received a warm welcome from the famous writer Munthe. He is a very old man deeply interested in Indian culture who said, "Yours is a blessed country. You have produced the *Upanishads;* you have produced the *Ramayana* and the *Mahabharata;* you have produced the Buddha; and in recent times Gandhi. How I wish I could hear the *Ramayana* recited!" Dr Ranganathan generally carries with him a copy of Valmiki's classic. Without a moment's hesitation, he read out some profound passages. The aged author realised that it was one of the great moments of his life.

In Stuttgart after a heavy day's work at a library conference, he finds that a large group of Germans interested in literature and philosophy request him for a talk on the *Gita.* Without a pause or hesitation, he gave them an insight into the wisdom of Ancient India.

3 Ascetic Life

In his habits he is almost ascetic. He takes no coffee, or tea, although whenever I visit him, his wife brings me a cup of delicious coffee. His demands are· 'a bowl of rice and vegetables, a glass of milk and some fruits' He lives in what would be considered to be poverty There is hardly any modern furniture in his house While he was the Professor of Library Science at the Delhi University, an official of the Central Government protested against his way of life by saying how wrongly foreign visitors would be impressed about India But he would not yield and suggested that his American friends came to consult him and not to be entertained by him He insisted on using public transport for conveying him to meet him Money was of value only when it was used for a right purpose. Out of his savings, he gave a lakh of rupees to the Madras University for instituting the first endowed Chair in Library Science which he had built up with enormous patience and devotion

4 Madras University Life

His hours of work were from 5 A M in the morning till late at night He had his morning walk in the campus, which he utilised for informal discourse with his students. This enabled him to be in the library at 7 A M and help students and other readers in their search for material Whether it was Mathematics or Sanskrit or Engineering, he would supply the research student with the books or papers that he needed There was a human side to all his academic work Young people have their own problems He would watch very carefully their reading For if it is important to choose what one eats, it is even more important to select what one reads His attitude was that of a wise teacher of the living wisdom and not merely of a scholar He would study their problems and suggest ways in which they could have the appropriate guidance from the great writers and thinkers He brought to the university something of the ancient tradition of the *Guru* in India and of the Ancient Platonic way of discourse

There is a deeper aspect of Dr Ranganathan's life that is likely to be obscured by his vast learning It is his deeply religious and spiritual outlook and a humility that enables him to listen to people who have any genuine thought or feeling.

PART X

APPENDIXES

Appendix 1

MEMBERS OF THE RANGANATHAN COMMEMORATION VOLUME COMMITTEE

Abdul Haq A M: Librarian, Institute of Public and Business Administration, University of Karachi, Karachi, *Pakistan*

Abrikosova F: Deputy Director, Lenin State Library of U S S R, Moscow, *Russia*

Allinson Mary L: Editor, Special Libraries Association, New York, *USA*

Amatya P P: Assistant Librarian, Tribhuwan University, Kathmandu, *Nepal*

Appadorai A: Director, Indian School of International Studies, New Delhi, *India*

Asheim Lester: Director, International Relations Office, American Library Association, Chicago, *USA*

Atherton Pauline: Assistant Director, Documentation Research Project, American Institute of Physics, New York, *USA*

Bashiruddin S: Librarian & Head of the Department of Library Science, Rajasthan University, Jaipur and President, Rajasthan Library Association, *India*

Bhatia Sant Ram: Editor, *Indian Librarian*, Jullundur, *India*

Block Cecil: Librarian, University of Ceylon, Peradeniya, *Ceylon*

Bourgeois P: Director, National Library, Bern, *Switzerland*

Breycha-Vanthier A: Chief Librarian, United Nations Library, Geneva, *UN*

Cain T: L' Administrateur General, Bibliotheque Nationale, Paris, *France*

Carter E J: Director, Architectural Association, London; *Formerly* Head of Libraries Division, Unesco, *UK*

Childs James B. Specialist on Government Publications and Cataloguing, Library of Congress, Washington, *USA*

Chitale S: Assistant Director General, Directorate General of Health Services, New Delhi, *India*

Clapp Verner W: President, Council on Library Resources, Inc, Washington, *USA*

Coblans H: International Federation for Documentation, Cern, Geneva, *FID*

Coney Donald: Librarian, University of California, New York, *USA*

Crossley C A: Assistant Librarian, Bradford Institute of Technology, Bradford, *UK*

Dalton Jack: Dean, School of Library Service, Columbia University, New York, *USA*

Das Gupta S: Librarian and Head of the Department of Library Science, University of Delhi, Delhi, *India*

Deshpande K S: Librarian, Karnatak University Library and General Secretary, Indian Academic Libraries Association, Dharwar, *India*

Doshi P: Editor, *Pustakalaya*, Bihar Rajya Pustakalaya Sangha, Patna, *India*

Downs R B: Dean of Library Administration, University of Illinois, Urbana, *USA*

Drochmann A G: Svenda Allo, Lyngby, *Denmark*

Dunningham A G W: Unesco Expert, Technical Assistance Mission to Indonesia, Djakarta, *Unesco*

Dutta T C: President, Bengal Library Association, Calcutta, *India*

Eaton Thelma: Professor, Graduate School of Library Science, University of Illinois, *USA*

Ellsworth Ralph E: Director, University of Colorado Libraries, Colorado, *USA*

Fazal Elahi: Librarian, American Friends of the Middle East, Karachi, *Pakistan*

Foskett D J: Librarian, Institute of Education, London University, London, *UK*

Fukuda Naomi: Librarian, International House of Japan Library, Tokyo, *Japan*

Garde P K: Librarian, ECAFE, Bangkok, *United Nations*

GHOSH G B General Secretary, IASLIC, and Librarian, Geological Survey of India, Calcutta, *India*
GREYBE Jean Director, Council of Scientific and Industrial Research Library, Pretoria, *South Africa*
HADEN J W Librarian, International Labour Office, Geneva, *ILO*
HATSUKADE I Director, Division of Inter-library Services, National Diet Library, Tokyo, *Japan*
HINGWE K S: Librarian, Jayakar Library, University of Poona, Poona, *India*
HUSAIN S V Assistant Director of Libraries, Government of Pakistan, Karachi, *Pakistan*
HATTOR Kintaro Instructor, Training Institute of Librarians, Ueno Park, Tokyo, *Japan*
IVANUSIC Milutin: Director, Jugoslovenski Bibliografski Institute, Beograd, *Yugoslavia*
JENSEN E Allerslev Director, State Inspector of Public Libraries, Copenhagen, *Denmark*
JONES D C Henrick Assistant Executive Secretary, International Conference on Cataloguing Principles, National Central Library, London, *IFLA*
KAULA P N· Librarian and Head of the Dept of Library Science, Banaras Hindu University, Vanarasi, *India*
KESAVAN B S Director, INSDOC, Delhi, *India*
KHURSHID Anis Head of the Department of Library Science, University of Karachi, Karachi, *Pakistan*
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(*Governor, Bihar, India*)

Secretary
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APPENDIX 2

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APPENDIX 3

CHRONOLOGY AND FACTS ABOUT S R RANGANATHAN

Note The chronology of publications is given in Volume 2

1892	*Date of birth*, 9 August (Date current in official use 12 August)
	Place of birth, Shiyali, Tanjur District, Madras State (India)
	Family home, Ubhayavedantapuram, Tanjur District
	Name of father, N Ramamritam Ayyar (1866-1898)
	Name of Mother, Sitalakshmi (1872-1953)
1897-1908	*School education*, Sabhanayaka Mudaliar's Hindu High School, Shiyali (with a break in 1907 on account of illness)
1907	*Marriage*, Married Rukmani (1896-1928) in July
1909	Matriculated
1909-1916	*College Education*, Madras Christian College
1913	B A Degree
1916	M A Degree
1916-1917	*Professional education*, Teacher's College, Saidapet, Madras
1917	L T Degree, Secretary of the Mathematics Association of the College
1917-1920	Assistant Lecturer in Mathematics, Government College, Mangalore, Founded the Mathematics and Science Association of the College
1920	Assistant Lecturer in Mathematics, Government College, Coimbatore
1921	Assistant Lecturer, Government College, Mangalore (January-July)
1921	Assistant Professor of Mathematics, Presidency College, Madras
1922-1923	Secretary of the Lunch Club, Presidency College, Madras
1922-1923	Secretary, Mathematics and Science Section, Madras Teachers Guild
1923	University Lectures on the Theory of Groups (Madras)
1924-1944	First University Librarian of the University of Madras
1924-1925	School of Librarianship, University College, London,
	Apprenticeship in the Croydon Public Libraries under W C Berwick Sayers
	Visit to about 100 libraries in Great Britain
1924	Design of Colon Classification begun in November
1925	Trial of Colon Classification with the printed catalogue of the Madras University Library and the Ship Library on board S S Dumana (June-July)
1926	Presidential address at the Pudukkotta Library Conference (June)
1927	Local Secretary of the All India Public Library Conference held in Madras along with the meeting of the Indian National Congress
1928	Foundation of the Madras Library Association (3rd January)
1928-1948	Secretary, Madras Library Association
1928	Madras University—Vacation Lectures on the Laws of Library Science at Chidambaram (December)
1928-1933	Courses of lectures on School Library at the Teachers' College, Saidapet
1928-1934	Treasurer of the Indian Mathematical Society
1929	Started the School of Librarianship of the Madras Library Association, Duration 1929-1931
1929	Married Sarada (1908-) (November)
1930	Secretary, Library Service Section of All Asia Educational Conference, Banaras (December),
	Drafted Model Library Act.
1931	Drafted the First Library Bill for Bengal (January)

1931	Started the School of Library Science at the University of Madras (April)
	Duration as Certificate Course 1931-1937
	Duration as Diploma Course 1937-1960
	Duration as Degree Course 1961-
1933	Framed the constitution of the Indian Library Association (October)
	Enrolled as the first Life Member of the Association
1933-1937	Madras University, Vacation Lectures on School Library Work
1935	Award of *Rao Sahib* by the Government of India (January)
1936	Drafted the First Library Bill for Madras
1942	Drafted the Second Model Library Bill for the Indian Library Association
1942	Drafted the Library Development Plan for the University of Delhi at the invitation of Sir Maurice Gwyer, the Chief Justice of India and Vice-Chancellor of the University
1942	Opened the Twenty-fourth Andhra Library Conference at Hindupur
1944-1953	President, Indian Library Association
1944	Lectures on Classification in the University of Bombay (December)
1945	Library tour of Kerala and South Kanara (January)
1945	First draft of Library Development Plan for India at the suggestion of the Commissioner for Education of the Government of India (February)
1945-1947	University Librarian and Professor of Library Science, Banaras Hindu University
1946	Library Development Plan for Allahabad University (March)
1946	President, First Library Conference of Central Provinces and Berar (October)
1946	Library Development Plan for the Nagpur University (October)
1946	Library Development Plan with draft library bill for the Central Provinces and Berar (November)
1947-1955	Professor of Library Science, University of Delhi
1947-	Chairman, Documentation Committee of the Indian Standards Institution
1947	Library Development Plan with a draft library bill for Cochin
1947	Library Development Plan with a draft library bill for Travancore (February)
1947	Opening of the First Travancore Library Conference (February)
1947	Library Development Plan for the Forest Research Institute, Dehra Dun (September)
1947	Library Development Plan with a draft library bill for U P (November)
1947	Library Development Plan for the Indian Institute of Science, Bangalore (December)
1948-1953	Member, Adult Education Council, Delhi Municipality
1948-1957	Vice-President, Madras Library Association
1948	Awarded D Litt, *Honoris Causa* by the University of Delhi (March)
1948	Member of the Committee on National Central Library
1948	Library Development Plan for the University of Bombay (March)
1948	Library tour of Europe and USA sponsored by the British Council (June-September)
1948	FID Conference and Conference of ISO/TC 46 at the Hague (July)
1948	Member, International Committee of Library Experts, United Nations (August)
1948	Draft Library Bill of Madras enacted as the Library Act (August)
1948	Member of the Faculty, Unesco International School on Public Librarianship, England (September)
1948	IFLA Conference, London (September)
1948	President, All India Adult Educational Conference, Mysore (December)
1949-1953	Secretary, Indian Adult Education Association
1949	Negotiated with UNESCO for the establishment of the Delhi Public Library as a Pilot project

1949	President, All India Library Conference, Nagpur (January)
1950	Presided over the Gwalior Library Conference (March)
1950	Negotiated with UNESCO for the establishment of INSDOC (April)
1950	Consultant UNESCO for preparing the place of machinery in literature search (April)
1950	FID Conference, ASCONA (May)
1950	Tour of United States at the invitation of Rockefeller foundation (May-September)
1950	Golden Jubilee Address to the Classification and Cataloguing Division of the American Library Association, Cleveland (July)
1950	Institute of Bibliographical Organisation, Chicago (July)
1950	Represented India at the Centenary Celebration of the British Library Act (September)
1950	Formed Library Research Circle in Delhi
1950	Formed Delhi Seminar in Library Science at the University of Delhi
1951	Member, Advisory Committee of INSDOC, New Delhi
1951-1961	Rapporteur General, FID/CA (Committee on General Theory of Classification of FID)
1951-1953	Member, International Advisory Committee on Bibliography of UNESCO
1951	Elected Honorary Fellow, Virginia Bibliographical Society
1951	Promoted the formation of the Asian Federation of Library Associations at Indore (April)
1952	Conference of Local Library Authorities of Andhra Pradesh, Patmata (January)
1952	Consultant of Jaffna Public Library, and library tour of Ceylon (March)
1953	Secretary of the Seminar on Literature for Neoliterates, Okhla, Delhi (January)
1953-1956	Vice President, FID
1954	Presided over the First Hyderabad Library Conference (April)
	Helped in the enactment of the Hyderabad Public Libraries Act
1954	Attended ISO/TC 46 Conference at Brussels (June)
1954	Attended FID Conference, Belgrade (September)
	Attended IFLA Conference, Zagreb (September)
1955	German Library Conference, Dusseldroff (July)
1955	Third World Congress of Librarians and Documentalists at Brussels (September)
1955	ISO/TC 46 Conference at Stuttgart (September)
1956	German Library Conference, Berlin (July)
	Library tour of East Germany (July)
1956	Endowed Sarada Ranganathan Chair of Library Science in the University of Madras (July)
1956	Attended FID Conference, Stuttgart (September)
1956	Attended IFLA Conference at Munich (September)
1956	Lecture tour of the library schools of Great Britain (November-December)
1957	Award of *Padmashri* by the Government of India (January)
1957	Opening Address at the International Study Conference on Classification, Dorking (England) (May)
1957	Seminar on Productivity Drive, Government of India, New Delhi (September)
1957	*Membership of Honour* of FID (September)
1957-1959	Visiting Professor of Library Science, Vikram University, Ujjain
1957	Presided Documentation Section, Indian Standards Convention, Madras (December)
1958-1961	Vice-President, FID
1958	Presided, M P Library Conference, Bhopal (March)
	Founded M P Library Association
1958-1959	Chairman, Library Committee, University Grants Commission, New Delhi

1958	Lecture Tour to the Departments of Libraries, United States, Canada, Japan (September-November)
1958	Panel Member, Washington International Conference on Scientific Information (October)
1958-	President, Madras Library Association
1958	Chairman, Library Buildings, Fittings and Furniture Committee of the Indian Standards Institution
1959	Director, Seminar on Social Science Research and Libraries (January)
1959	President, Bengal Library Conference at Nawadwip (March)
1959	Library Development Plan and the draft library bill for Bengal (March)
1959	Director, U G C Seminar on Work-flow from publisher to reader—work-flow in college and university libraries (June)
1959-	Banaras Hindu University Court
1959	One-man Committee of the Working Party of Scientists of the Planning Commission to draft a Plan for Scientific and Technical Information Centre for the Plan period
1959	Chairman, Indian Library Convention, Delhi (December)
1959	Cleveland Conference on Common Language for Machinery for Search
1959	FID Conference at Warsaw, Visit to Moscow
1959	Chairman, Documentation Section, Second Indian Standards Convention, Hyderabad
1959	Consultant on Library Development Plan for Kerala State (July)
1960-	Chairman, Review Committee on Library Science, University Grants Commission
1960	Chairman, library science Courses Committee, University of Madras (September)
1960	Chairman, Expert Committee on Library Science, Banaras Hindu University (September)
1960	Member, Board of Studies in Library Science, Osmania University
1960	Course of lectures on Library Science, Osmania University
1960	Member, Board of Studies in Library Science, Utkal University
1960	Chairman on Committee for Library Science Course, Mysore University (July)
1961	Special invitee to the International Conference on Cataloguing Principles held at Paris (September)
1961	Leader of the Indian Delegation to the Ter-Centenary Celebration, National Library of East Germany (September)
1961	Chairman, Preservation of Documents Section, Indian Standard Institution, Kanpur
1962	Chairman, Committee to draft the Library Bill for Mysore State
1962-	Honorary Professor, Documentation Research and Training Centre, Bangalore
1962	Director, Government of India Seminar on School Libraries, Bangalore (March)
1962	Director, Government of Andhra Pradesh Seminar (March)
1963	Director, National Seminar, DRTC, Bangalore (June)
1963	President, Fourth IASLIC Conference, Poona (October)
1964	Awarded *D Litt* by the University of Pittsburgh, Pennsylvania (USA) (June)
1964	Director, M, W, F, Master's course and T, Th, Ph D Course, University of Pittsburgh, Pennsylvania (June-July)
1964	Lectures at the Library Schools of the University of Pittsburgh, University of Chicago and the Columbia University (June-July)
1964	Chairman, International Study Conference on Classification, Elisnore (Denmark) (September)
1964	Visit to Oslo (Norway) (September)
1964	Director, International Seminer on Colon Classification, Rutgers University (USA) (November)

APPENDIX 4

SEVENTY-FIRST BIRTHDAY

RANGANATHAN COMMEMORATION VOLUME COMMITTEE

Chairman
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(*Governor, Bihar, India*)

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P N Kaula
(*Librarian & Head of the Dept of Lib Sc, BHU, Varanasi*)

Festschrift to Dr Ranganathan

AN APPEAL

It is gratifying to note that Dr S R Ranganathan, a doyen among litterateurs, a diadem in the field of education, a renowned designer of bibliological classification and its foundations, and the Master-Architect in the domain of Library Science, has completed his 70th birthday in August 1962

A dynamic personality all along, endowed with indefatigable energy and a powerful analytical mind, baptising his students and disciples into the intricacies of Library Science—there have grown around him a number of able and devoted library-scientists and librarians, some of whom have attained an International stature and reached a position of rank and leadership in the profession

Born as a teacher and having enjoyed teaching mathematics at the University of Madras for seven years, he was destined to serve the library profession—unknown, unrecognised and uncherished in India till his advent—and to rear it throughout his life with a devotion coupled with work-chastity

As a library-scientist, he has been acknowledged as an International Expert, an originator and inventor of a bibliographical classification and of the only complete code for a Classified Catalogue His chief contributions are the Five Laws of Library Science, Facet-analysis, Phase-analysis, Zone-analysis, Octave notation, Group notation, Seminal mnemonics, Diverse Devices, Canons for subdisciplines of Library Science, Chain Procedure, Three-card System, Depth classification, Feature Headings, Library system, and Standardization of library buildings, fittings, and furniture He is the most prolific writer on library science, having produced about 50 original works, a few hundreds of articles, and scores of library development plans

As an inspiring teacher, he has been the Librarian and Head of the Department of Library Science at Madras and Banaras Universities, and has held the Professorship in Library Science at Delhi and Vikram Universities He has been a member, secretary, and president of several national and international bodies in library science He has been honoured by the Government and by several national and international organizations He has been recognised as the Father of Library Movement in India He has given to India a leadership in Library Science and has above all, stimulated generations of librarians to think

He has given away his life's earnings amounting to a hundred thousand rupees towards the establishment of a Chair in Library Science, named after his life-partner as Sarada Ranganathan Professorship. A pioneer in reality, a humanist in outlook, a benefactor to library science, he has put the library profession under an everlasting debt.

To pay homage to this multifacted personality, who belongs to the world, the library profession of the world celebrated his 71st birthday in August 1962 and are presenting a FESTSCHRIFT to him An International Committee consisting of top library scientists of the world has been formed to celebrate this international event. It is the intention of the Committee to institute Gold Medals in Library Science both at the national and the international level to commemorate this event

The Committee is in need of large FUNDS which cannot be collected without the generous donations of librarians, lovers of libraries, and friends, old students, and admirers of Dr Ranganathan. An Appeal is, therefore, made to contribute generously to make this intention a reality and thereby express our gratitude to Dr Ranganathan.

The contributions may kindly be sent to the Secretary, Ranganathan Commemoration Volume Committee, CI Banaras Hindu University, Varanasi-5 (India)

The Members of the Ranganathan Commemoration Volume Committee

PART Y

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CHAPTER Y

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Note:

1 The Index Number in each entry is the number of the Part and the Chapter or the Section in which the item occurs in the publication.

2 The first letter of the Index Number denotes the Part.

3 The first letter 1-8 and the letters 91-98 following the Part Number denotes the Chapters Number.

4 The Indo-Arabic numbers following the Chapter Number denote the Sections and Subsections.

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i r t=In relation to
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